

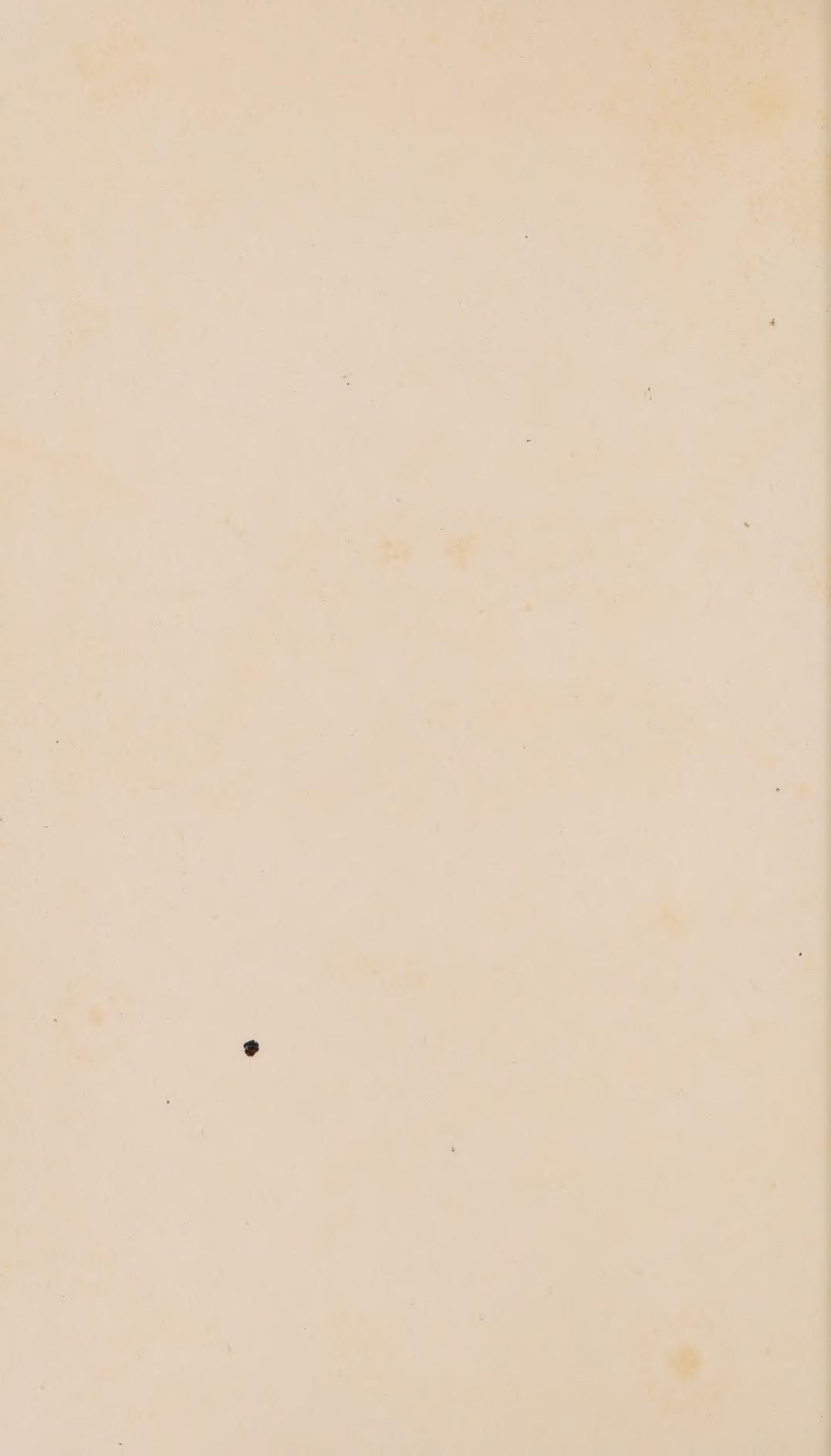
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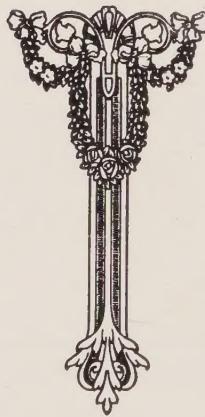
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OSTEOPATHY

The Science of Healing by Adjustment

SIXTH EDITION



PERCY H. WOODALL, M. D., D. O.

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PREFACE

There is much misinformation concerning Osteopathy. It has been confused in the public mind with every conceivable form of treatment. An effort is here made to give an authoritative, simple, non-technical statement of its principles; to show that they are original, distinctive and unique, and to explain their application to the treatment of diseases.

As a graduate and former practitioner of medicine, I have endeavored to present the claims of Osteopathy to recognition as a school of healing, conservatively and fairly. We ask an unprejudiced judgment.

Indebtedness is acknowledged to Macfie's "The Romance of Medicine," Gorton's "The History of Medicine," Wilder's "History of Medicine," Boerick and Anshutz's "The Elements of Homœopathic Theory, Materia Medica, Practice and Pharmacy," Deason's "Physiology—General and Osteopathic." Especial thanks are due to Dr. F. P. Millard.

PERCY H. WOODALL, M. D., D. O.

PUBLISHED BY
AMERICAN OSTEOPATHIC ASSOCIATION
AT ORANGE, N. J.

INTRODUCTORY

The Evolution of the Healing Art

The practice of the Healing Art was born of man's necessity, and every age, in varying degree, has claimed its ministrations. It is as old as human nature and doubtless originated from man's instinctive efforts to relieve his own suffering. Skulls from the neolithic period with unmistakable evidences of trepination afford abundant proof that this severe operation was attempted as remotely as the early stone age.

Although legendary history relates that centuries before the culmination of Egyptian civilization, medicine was crudely cultivated by certain Chinese kings, yet medicine as an Art and Science seems most probably to have originated with the Egyptians. King Athosis who lived more than 6,000 years ago, is said not only to have acquired an elaborate knowledge of medicine but to have written books on anatomy.

The earliest Egyptian medical practices were religious and consisted mainly of incantations. The later evolution of medical treatment made use of drugs and herbs, many of which are in use today. Castor oil, squills, turpentine, opium, and lead, trace the ances-

try of their usage to the Egyptian prognostics. Free use was made of hair dyes, hair restorers, cosmetics, and even opiated sooth-ing syrups. Five thousand years before Christ dentists filled teeth with gold and surgeons performed difficult operations, with instruments very similar to those in present-day usage. They possessed some knowledge of the circulation of the blood; specialists treated all the different organs and diseases; physicians wrote prescriptions after the manner of the present century. Nor were they exempt from numerous pre-tenders and empirics, the antecedents of our modern quacks. It was from the Egyptians that Moses doubtless received his marvelous knowledge of hygiene and sanitation, the practice of which entitled him to rank as one of the greatest physicians of history.

But most human good has an evangelical, or at least mercantile, desire for self-propa-gation, and medicine soon made its way from Egypt into Greece. Aesculapius, the Greek god of medicine, is attributed to the thirteenth century before Christ. His two sons, Machaon and Podilarius, were said by Homer to have been present at the seige of Troy, and Podilarius is said to have been the first physician to practice bleeding. Hygeia, the beautiful daughter of Aesculapius, is the first woman physician recorded among the Greeks. While at this time there were many

superstitious and ridiculous practices, there were also practices of undoubted and permanent value, gymnastics, massage, poulticing, counter-irritation, and baths.

Although the art of medicine doubtless originated in the valley of the Nile, the land of mystery and silence, it is to ancient Greece, “the land of life and light, of liberty, of heroism, of creative art, industry and literature, of lovers of truth and beauty,” that we must look for the first flush of the dawn of modern medical thought.

To the celebrated Hippocrates, the “father of medicine,” a lineal descendant of Aesculapius, eighteen generations removed, this development must be attributed. Medicine and medical heroes had slumbered for nearly a thousand years when Hippocrates appeared. He was the first to catch a glimpse of the part which that mysterious force called “Nature,” plays in the process of cure, and upon this realization that “*Nature cures*” he laid the foundation of modern medical thought and teaching. Hippocrates was a man of elastic and expansive mind, gifted with marvelously accurate and discriminating powers of observation and description. Some of his descriptions of symptoms and diseases have never been improved upon. His character and ideals were of the highest and after more than two thousand years he remains the ideal physician. Yet his renown

was greater as a surgeon than as a physician.

Following in the wake of Hippocrates and benefiting by his blazing of the trail, comes an array of lesser lights ushering in events important and pregnant with lasting influence upon the evolution of the Healing Art. From the mass of determining factors time permits us to select only the most important.

Many noted physicians of antiquity have been women. One of the most distinguished was at the same time one of the most infamous, Cleopatra, Queen of Egypt. History ascribes to her the authorship of treatises upon the Diseases of Women, but as these manuscripts have been destroyed their professional value is unknown.

As a great leader in medical thought, chronologically, Galen next assumes prominence. Although a Greek by birth, and educated in Alexandria, he made Rome, as the center of the civilized world, the theatre of his activities. He was the first to describe the production of the voice, the function of the kidneys, and to determine many significant facts relative to the nervous system. He remained the oracle of the medical profession for more than fourteen hundred years, and woe to any man who for any reason, dared to dispute his teachings.

After the death of Galen, which occurred about 200 A. D., the progress of medicine languished for many centuries. The dark

ages were already beginning to cast their sinister shadow over the world. Culture and learning, universally, were in a sad state. Greece was no more, or at best a memory; Rome was unfavorable to the development and growth of science, and Alexandria was declining. In 638 the Mohammedans took Alexandria and burned the greater part of its magnificent library. The avowed reason was that if its books agreed with the Koran they were useless and if they disagreed therewith, they were wicked. Fortunately some of its medical works fell into appreciative hands and the Arabians for several hundred years kept alive the spark of medical knowledge. Although they were first to describe small-pox and measles, the Arabians added but little to the evolution of the Healing Art. They merely kept alive what had been attained. In the early part of the ninth century, at Salerno, Italy, was established the first medical college in Europe. During the eleventh century, Arabia suffered a period of decline and the church became the nursery of learning, though there was but little science and less effort at scientific discovery. Diseases were generally ascribed to astral influences. In the fourteenth century, the study of anatomy was revived. Anatomical illustrations of dissections were now made upon metal or wooden plates from which copies could be made upon the printing press.

A general idea of the status of medical knowledge of the fifteenth century is afforded in the fact that the plague which visited Europe at this time was variously ascribed by the medical profession to "filthy habitations and habits, gross errors of diet, impure water—and the Jews, a perpetual plague to Christians." The stars were still held by the highest authority to be responsible for much sickness.

The sixteenth century was an age of considerable progress. Two very remarkable men appear during this century, Paracelsus and Vesalius, who left many positive impressions upon the development of medicine. Paracelsus dared to dispute the teachings of the medical fathers and to use the dialect of the common people in his lectures. For this offense of "profaning and vulgarizing the medical art by making its mysteries known to the laity," and for his independence in opposing the fallacies of the profession he was denounced and persecuted and finally treacherously murdered by assassins. The deed is said to have been instigated by his jealous colleagues. Vesalius, in his zeal for dissecting material, is said to have fought with hungry dogs for bones in the cemeteries of Paris, and to have stolen a corpse from a gibbet. He wrote a book on anatomy as he had seen it with his own eyes. As the book was a contradiction of the accepted writings

of Galen, Vesalius met everywhere with the most bitter, bigoted and unrelenting opposition.

During this period the surgeons were the barbers, the horse-shoers and even the cobblers and tinkers. Surgical operations were crude, cruel and but little more to be desired than death. A French barber-surgeon, Ambrose Pare', introduced the use of soothing dressings for wounds, to displace the former practice of pouring them full of boiling oil. He also began to tie arteries after amputations, instead of plunging the stump into boiling pitch. Yet these humane and common sense innovations brought upon him the bitter hatred of his professional brethren, although they greatly increased his popularity with the laity.

We now approach one of the most illustrious names and one of the most important discoveries in the annals of medicine, William Harvey, and his discovery of the true cause and nature of the circulation of the blood. Notwithstanding that in the earliest Egyptian medical documents there is a clear reference to a movement of the blood to and from the heart, and that Herophilus, in the third century B. C., by dissection of the *living* human subject knew of the circulation of the blood, the elasticity of the arteries and the nature of the pulse, yet the discovery of the circulation of the blood as we now know it is

accredited to Harvey. Although he wrote logically, learnedly and scientifically and his arguments were indisputable, Hume says that “no physician over forty years of age ever accepted Harvey’s theory.” It is also said of him, “he fell mightily in his practice—and all the physicians were against his opinion and envied him.”

In the year 1661, the microscope, which in the medical world is now indispensable, was discovered by Malpighi. This discovery brought upon him the severe disapproval of his associates who declared that “the study of microscopic anatomy was averse to the true interests of medical practice.”

Edward Jenner, the next illustrious pioneer, is honored by “regular” medicine as the one who introduced and established vaccination against small-pox. They have now made vaccination compulsory wherever they can, but in the beginning they heaped upon the practice all the abuse and ridicule possible. They declared that it was not only useless but harmful, and that vaccinated children “became cow-visaged and bellowed like bulls.”

In the year 1800, with the discovery of nitrous oxide or laughing gas and its power to produce insensibility to pain, came the dawn of a new era in surgery. The culmination of the use came about in 1844. Ether was used the next year, and chloroform the

year following. The use of anæsthetics was strongly opposed at first by the clergy, the laity, and by many physicians. The first use of anæsthetics, it must be remembered, however, was by no means so modern as this, for the surgeons of antiquity used drugs to produce sleep during operations.

The perfection of the compound microscope in 1830, opened up to us the universe of cells and germs. Of the composition of the body we hitherto had known comparatively nothing. A prominent authority in the middle of the eighteenth century crudely said, "our bodies are gradually built up of a slimy and gelatinous fluid." The microscope demonstrated that our bodies are commonwealths of cells, and instead of being a little less than the angels we were shown to be but a step higher than God's lowest creatures. We may say to the worm, "thou art my brother and my sister," and to the tubercle bacillus, "thou art my brother Cain." We are not such stuff as dreams are made of, but are of the same physical stuff as the vilest creeping things. The beauty and the beast, the rose and the reptile, the cabbage and the king, the microbe and the man, the fool and the philosopher, are of the same identical material, protoplasm.

Glimpses of the germ theory appeared in remote times. Tarentius Rusticus wrote two thousand years ago, "if there are any marshy

places, little animals multiply which the eye cannot discern, but which enter the body with the breath through the nose and mouth and cause grave diseases.” The first actual bacteria were seen and described by Leeuwenhock in 1675. The first bacterium of human disease was not discovered until 1863, when Davaine and Rayer discovered the bacterium that causes Anthrax. The names of Pasteur, Lister, Koch and a number of others are prominent in connection with the development of the germ theory of disease to its present day acceptance.

We have flattered ourselves that the part played by the mosquito in the transmission of diseases is of recent discovery. This, like many other things which we consider modern, is but another exemplification of theories proposed and all but proved in ages gone by. In a Sanskrit work of fourteen hundred years ago, is the statement that the bite of a certain variety of mosquito is followed by “fever, pain in the limbs, goose-skin, vomiting, shivering and an intense feeling of cold.” Even the uninitiated will recognize the malarial chill from this description.

Any account of the development of medical theory and practice must be accounted incomplete which neglects the modern trend toward mental therapeutics. In the early seventies, Mrs. Mary Baker Eddy developed a religious and therapeutic movement, called

Christian Science. This movement has presented an important element in the evolution of the Healing Art in that it has caused the medical profession to devote more attention to the mental and psychic causes and features of diseases.

In the latter part of the eighteenth century, Samuel Hahnemann instituted a new method of administering drugs, called by him Homeopathy. Homeopathy has greatly modified medical practice and has paved the way for what is in fact, drugless healing.

Finally in 1874, Dr. A. T. Still, by announcing that all drugs and chemicals necessary to maintain health are manufactured by the body in its own laboratories, gave to the world osteopathy, the science of Healing by Adjustment, a true system of natural healing. We are led up to this system of Healing by Adjustment by the foregoing brief recitation of the steps in the evolution of medicine.

OSTEOPATHY
The Science of Healing
by Adjustment

OSTEOPATHY

The Science of Healing by Adjustment

Adjustment was doubtless one of the earliest methods of healing practiced by primitive man. In encounters with wild beasts, in conflicts with his fellow man, and in the accidents incident to his precarious existence, it was natural that he should have received fractures of his bones and dislocations of his joints. His dawning reason taught him that these should be set, that is, adjusted. So adjustment can properly claim first place in the beginning of the healing art.

These first efforts were necessarily crude because a clear knowledge of the anatomy or structure of the body was lacking. As knowledge and skill increased, manipulative surgery was born. Its function is to deal with the adjustment of the gross derangements of the large joints, neglecting the minor and minute irregularities of these large joints and practically all derangements of the small joints.

The importance of these minute irregularities in structure was for ages unappreciated. In the early seventies an "old school" physician, for many years a drug practi-

tioner, had lost his last ounce of faith in the therapeutics of drugs.

The hand of death had struck three of his children, after the best obtainable medical skill had been exhausted. When he found drugs powerless in curing disease, his grief, his despair and his helplessness impelled him to seek a more rational method of treatment. He conceived the idea that the human body was a living mechanism, subject like any other machine to mechanical derangement of its parts and that these derangements, however minute, interfered with the nerve paths and channels through which the vital fluids circulate. This hindered perfect action of the body and either caused or invited disease. He further contended that the human body was endowed by Nature with facilities within itself for manufacturing all the chemicals and drugs necessary for its growth and repair and for the maintenance of health. He reasoned along this line for several years, verifying his theories and perfecting his results until he had fully developed a new system of treating diseases. This "old school" physician was Dr. A. T. Still. He tells the story of his discovery as follows:

I was born and raised to respect and confide in the remedial power of drugs, but after many years of practice in close conformity to the dictations of the very best medical authors and in consultation with representatives of the various schools, I failed to get from drugs the results hoped for and I was face to face with the evi-

o f H e a l i n g b y A d j u s t m e n t

dence that medication was not only untrustworthy but was dangerous.

The mechanical principles on which osteopathy is based are as old as the universe. I discovered them while I was in Kansas. You can call this discovery accidental or purely philosophical. I was in the practice of medicine and had been for several years. I treated my patients as other doctors did. A part of them got well and a part died. Others, both old and young, got sick and got well without the assistance of the medical doctor.

As I was an educated engineer of five years schooling I began to look at the human framework as a machine and to examine all its parts to see if I could find any variation from the truly normal among its journals, belts, pulleys and escape pipes. I began to experiment with man's body as a master mechanic would when he had in his charge any machinery which needed to be kept perfectly adjusted and in line in order to get perfect work. I worked along patiently, faithfully and hopefully, finding out that the human body was just as liable to strains and variations as a steam engine, and that after correcting the strains and variations health was sure to follow. I was many years philosophizing, comparing and noticing results which followed taking off strains and pressure. I was surprised to see that fever, congestion and all irregularities gave way, health returned and the results were good and satisfactory.

I found mechanical causes for disordered functioning, or poor work of the head, neck, thorax, abdomen, pelvis or extremities. I adjusted the bony framework and secured such good results that I was encouraged to keep on and on until now I can truthfully say that I am satisfied that osteopathy is the natural way by which all the diseases to which the human body is heir can be relieved, and a large majority of them cured.

Osteopathy is based upon the perfection of Nature's work. When all parts of the body are in line we have

O s t e o p a t h y , t h e S c i e n c e

health. When they are not the effect is disease. When the parts are readjusted, diseases give place to health. The work of the osteopath is to ADJUST the body from the abnormal to the normal; then the abnormal condition gives place to the normal and health is the result of the normal condition.

Man cannot add anything to Nature's perfect work nor improve the functioning of the normal body. Disease is an effect only, and a positive proof that a belt is off, a journal bent, or a cog broken or caught. Man's power to cure is good as far as he has a knowledge of the right or normal position and so far as he has the skill to adjust the bones, muscles and ligaments and give freedom to nerves, blood, secretions and excretions and no farther.

Such is the simple story of the discovery of the fundamental principles involved in the science of osteopathy. It shows unmistakably that the peculiar, the distinctive, the essential feature of osteopathy is *adjustment*, adjustment of the structures of the human body. The purpose of an osteopathic examination is to find the maladjustment that is interfering with a free play of Nature's forces. The object of an osteopathic treatment is to *readjust* the deranged parts or conditions so that the natural state of health may be regained. In addition to adjusting body structure, osteopathy uses all the natural common-sense measures common to all schools, but drugs as remedies have no place in its practice. The essentials for its successful practice are an intimate knowledge of the structure and function of every part of

the human body, as well as an insight into all that pertains to human diseases.

Yet, while manipulations are a necessary part of osteopathy they are relatively of minor importance. The matter of prime importance is the ability to locate the maladjusted part and to interpret its effects. To do this requires the most comprehensive knowledge of all parts of the body and their respective uses, and of the evidences of their derangement. Without this knowledge of structure, function, and disorder, no degree of manipulative skill can make one an osteopathic physician. Merely to be able to manipulate no more makes an osteopath than the ability to cut makes a surgeon. A knowledge of when, for what, and how to cut is no more necessary to surgery than a recognition of when, for what and how to manipulate is requisite to osteopathy.

The osteopathic concept is that while man is a most complex and delicate mechanism, yet he is a being of life and feeling, vastly more than an inanimate machine; and that there are agencies other than maladjustments within his own body that affect his health. It appreciates the part that heredity, environment, habit, thought, over-use and abuse of organs and agencies, play in matters of health and disease. To the correction of these osteopathy devotes as much attention as does any other school of practice. It approves

and makes use of all natural means of healing of demonstrated value, and enjoins the correct observance of all laws of diet, hygiene, sanitation and psychology; in fact, all principles in accord with the natural laws of the human body are inculcated by this comprehensive science.

Osteopathy has been builded upon the established facts of science. It is not iconoclastic in its nature, but is constructive. It would not, if it could, refute a single established fact. It aims at the unfoldment of all truth in its relation to the cure of diseases. Its mission is to weld into one harmonious whole all that has been proved worthy in the healing art. It is willing to pay homage to and accept the teachings of all who from the earliest times to the present day have done aught to relieve human suffering. It demands that all theories be tried by the standard of truth and efficiency and that all failing to stand this test be rejected. The unrelenting law of evolution should be applied where the unfit and non-utilitarian theories must fail, and where the "workable," as William James says, survive and have survival value.

Osteopathy does honor to the heroes of preventive medicine who have demonstrated the role of the mosquito in malaria and yellow fever, and it has the profoundest respect for those great sanitarians who have changed

Havana from a plague spot to a city of health and beauty, and have made Panama habitable and wholesome. It is grateful to those geniuses of surgery who by their skill and conservatism have added length of days to man's life, and to those physiological chemists who have evolved a rational and helpful system of diet. It voices appreciation of the great minds that have mined into the realms of thought and have revealed the psycho-physiological inter-relation of mind and body. It appreciates the work of all these coadjutors; it makes use of their discoveries and recognizes them as collaborators in the advancement of the true art and science of healing.

It remained, however, for Dr. A. T. Still to add to the verities of anatomy the demonstrated truths of physiology and to these the immutable laws of mechanics, and from all these to formulate a system of treatment based upon the known laws of the sciences, and a system of treatment that shall endure as long as man has infirmities. This system has for its aim the extinction of disease and adds to all other helpful measures the one neglected, though most important and needful feature,—*the care of the structure of the individual*. All else may be perfect, but if this perfection of structure be lacking, disease results. Osteopathy teaches that structure is paramount in matters of health;

Osteopathy, the Science

and while it does not deny the influence of the mind it does insist upon the greater importance of the physical. Whatever may be the state of mind, whenever nerve impulses are perverted, or the blood stream diverted, or the structure disordered, the function of the part is necessarily deranged.

Osteopathy would acquaint man with the dignity, the majesty and the divinity of the human body, the perfection and self-sufficiency of God's own handiwork. It teaches that this "temple of the Spirit" is no gross and inert mass of matter, but an ever-growing, ever-expanding, ever-developing prototype of its Maker, endowed with agencies that tend to heal and to perfect.

A writer, in a recent medical journal, says: "Year after year the doctors have gone on treating symptoms. The study of causes and the knowledge of therapeutics is a lost art. We have been practicing medicine along the lines of palliation." Osteopathy reverses this disparaging practice and demands a search for and a removal of deleterious causes as its unchanging rule.

Osteopathy flatly repudiates that age-long fallacy that you must poison a sick man in order to make him well. It cannot give credence or sanction to internal administration of drugs for the cure of diseases. It places confidence in the use of drugs as anæsthetics, as antiseptics and as antidotes in



FIG. 1.

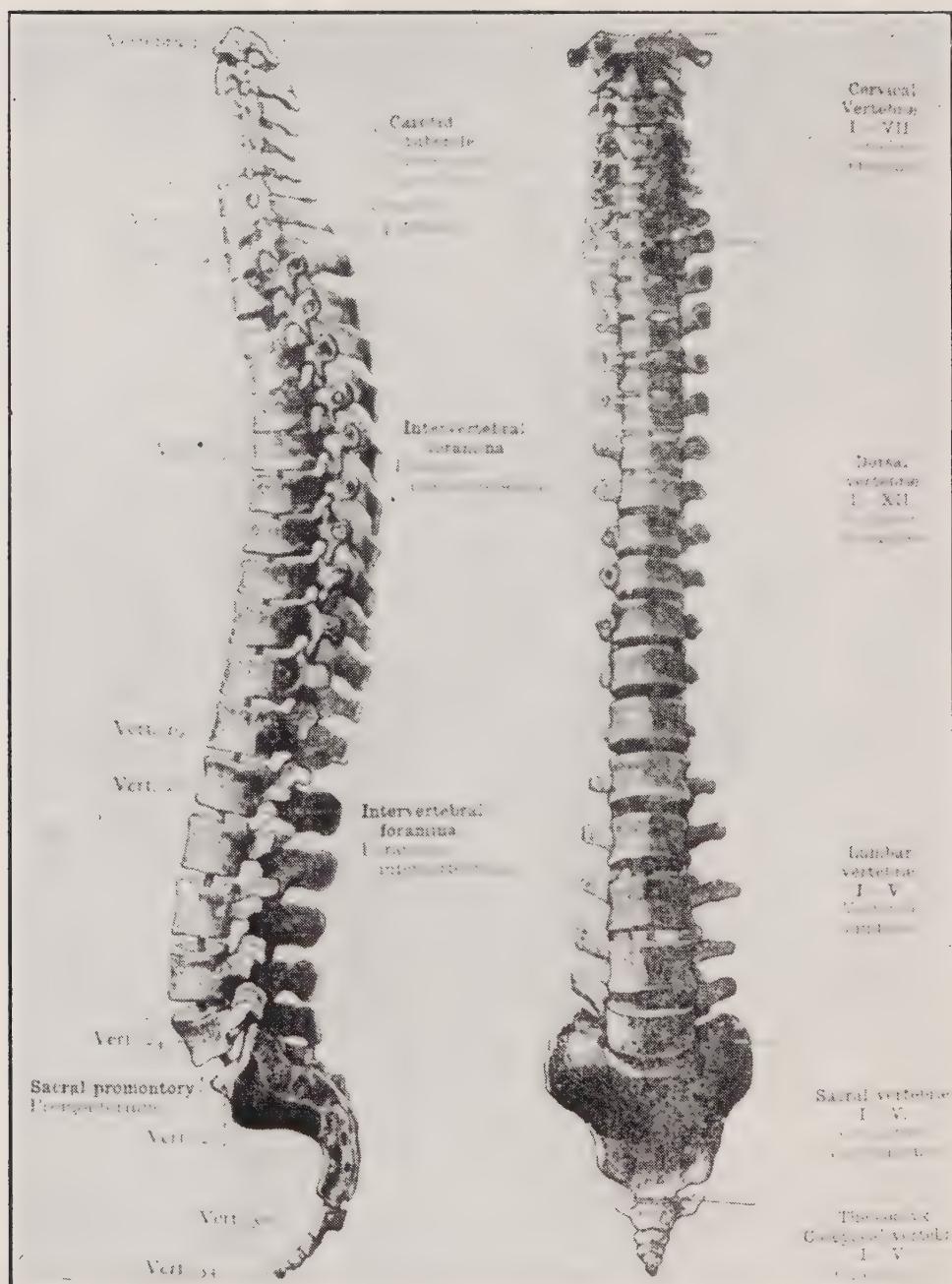


FIG. 2.

poisoning, but the administration of them internally for purposes of cure is not only useless but positively harmful. Those substances which cannot be appropriated by the body as food can add nothing to bodily strength, vitality or resistance. Even though remedies are not active poisons (which they usually are) they must be eliminated from the body. During disease the eliminating organs are already overworked, and to impose upon them at such time an additional burden is unnecessary and it may be permanently hurtful.

The administration of drugs in disease continues as a remnant of the remote past when diseases were thought to be due to demoniac possession, and when the greatest possible disturbance in the sick man's body was deemed the best means of ridding the patient of the offending devil. At first the most disgusting and nauseating remedies were used. The laity, after centuries of suffering, revolted at these, and now more palatable and agreeable compounds are administered. Many laymen, and no inconsiderable number of doctors, still think that a remedy must make the patient very sick in order to make him ultimately well. This conception still pays tribute to the outworn proposition that it requires one last great upheaval to overthrow the disease, or rather cast out the devil. No one can deny that

drugs do modify symptoms or have in many cases afforded relief, but there is always a reaction, a "kick" at the expense of the general vitality. The habits they have caused, the wrecks they have made, more than offset all the good they have done. Osteopathy offers a safer, a saner, a more effective, and a better way.

Osteopathy recognizes surgery as a science, and one that in the last few years has made wonderful progress. When properly employed, surgery is truly osteopathic in its application, and it is taught in the colleges as a part of the system of osteopathy. Osteopathy is, however, opposed to the present reckless and unnecessary tendency toward operations, for by its treatment many so-called surgical cases are cured and many operations are prevented. If osteopathy were given first trial, the necessity for operations would be greatly reduced. Surgery might be employed after osteopathy had failed, if it should fail, but from a surgical operation there is no recourse. From the surety of osteopathy we should turn to precarious surgery only as a last resort.

Osteopathy accepts the germ theory of diseases, to a qualified extent. It accepts the dictum of the other schools of healing, "germs cannot live in healthy tissues." While germs may determine the nature of the disease, yet there must be and is, prior to the

germ infection, some agency or first cause that by interference with the normal blood and nerve supply to the affected part has so reduced its vitality or resistance as to make it susceptible to germ invasion. Germs are everywhere. Earth, air, and water are full of them. Our bodies are havens and hot beds for them. To escape them is impossible and if it were not for the natural defences of the body we could not survive an hour. It is only when these defences become weakened that we become susceptible to germ invasion. Normal blood is Nature's own germicide, and germs in the presence of a good circulation of fresh, flowing blood disappear as green scum on the stagnant pool disappears in the presence of fresh, flowing water. In the blood there are bacteriocides to destroy germs, bacteriolysins to dissolve them, agglutinins to retard their movements, antitoxines to neutralize their poisons and opsonins to pre-digest them for the white blood cells.

The appealing reasonableness of the cardinal principles of osteopathy is more fully appreciated by a brief study of the structure of the human body. The skeleton (Fig. 1) is the fundamental structure of the body and bears the same relation to the body that the framework bears to the building or the steel structure to the sky-scraper. It is the keystone of the osteopathic curative arch. Let mechanical disorder occur here

and disturbance at once begins. In this skeleton there are some two hundred bones and from cranium to toes there are as many joints. These joints are capable of motion and wherever there is motion there is the possibility of displacement. It is doubtless true that out of these two hundred bones there is not one, with the exception of some of the bones of the face and the head, that has not at some time been misplaced. By misplacement we do not mean a gross and marked dislocation, apparent to the untrained eye and touch, but merely the *slightest* derangement in the mechanical order of this framework.

In Fig. 2 is shown the spinal column, commonly called the spine. You will notice that it has certain natural curves; these natural curves must be maintained or ill health results. Especial attention is called to the fact that the spinal column is not a single bone, but that it is made up of a number of small bones interconnected by joints. These joints are in intimate connection with the spinal nerves which pass out on either side between the vertebrae; notice also their connection with each other forming a canal which performs the vital function of inclosing the spinal cord (as is shown in Fig 3), the most important avenue of communication between the brain and the organs and tissues of the body. From it the spinal nerves, thirty-one

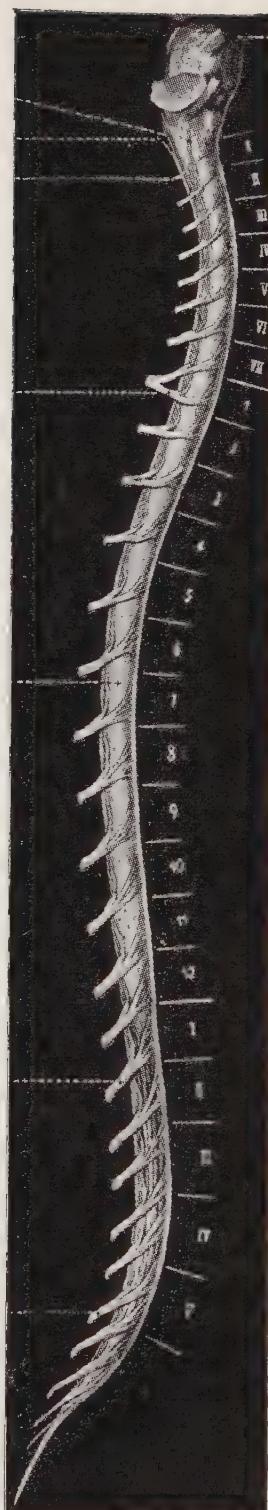
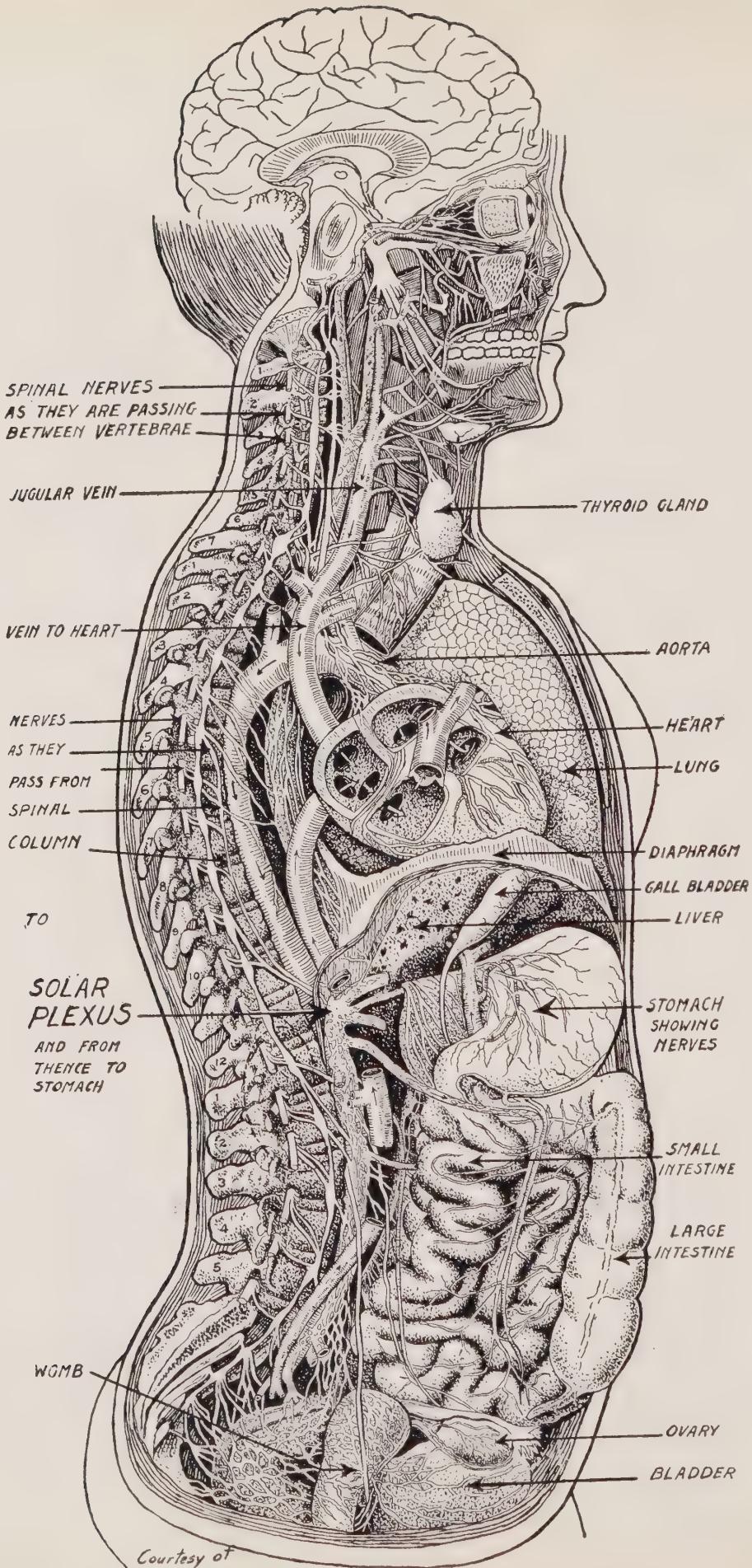


FIG. 3



Courtesy of
S.C. Matthews

FIG. 4.—Sympathetic Nervous System.

pairs out of a total of forty-three pairs in the entire body, take their origin. These spinal nerves are connected, in turn, with the sympathetic nerves, and by this union the motion, the sensation and the nutrition of every organ and tissue of the body are controlled.

In Fig. 4 is shown a picture of the body cut in half. In this you can observe the spinal nerves as they emerge from the openings between the vertebrae; notice also their connection with the sympathetic nerves and through these with the internal organs and tissues. Beginning in the neck at the highest point you can trace the connections to the nerves of the head, the eyes, the throat, the face, the thyroid gland, the heart and through the pneumogastric nerves to the stomach, the liver and the intestines. Further down are seen the connections with the heart, the lungs, the stomach, the liver, the spleen, the pancreas, the intestines, the pelvic organs, and the lower extremities.

Much is now said and written about "reflex" disorders. It is a matter of common medical knowledge that a decayed tooth may cause facial neuralgia, or a slight muscular defect about the eye may result in headache, or that slight irritation in the ear may effect nausea and vomiting, or that a diseased vertebra between the shoulders may produce pain in the "pit" of the stomach, or a diseased hip may create a pain in the

knee or that various internal troubles may cause backache. All these are called "reflex effects." Thus it is manifest that strains and slight misplacements of these spinal joints may cause deranged action of the tissues and organs in direct nervous connection with them. It is because these numerous spinal joints are in such intimate connection with the spinal nerves, each joint receiving fibres from the adjacent nerves, that the osteopathic physician devotes so much attention to the spine. The *slightest* derangement in the position of the bones concerned in the formation of these joints causes contraction and congestion of all the soft tissues, and irritation, perhaps inflammation of the joint structures. This irritation is transmitted to the organs to which the nerve supplying the irritated joint is distributed, and these organs become disturbed, as in the familiar cases of bad teeth and facial neuralgia, eye-strain and headache.

It is an undisputed fact that the large joints of the body, the hip, the shoulder and the knee with their numerous and strong ligaments and muscular protection, often become dislocated and strained so that their function is impaired. As a resultant the parts supplied by the blood vessels and nerves connected with the joint become greatly impoverished. When one considers that the joints of the spine are less abundantly protected by liga-

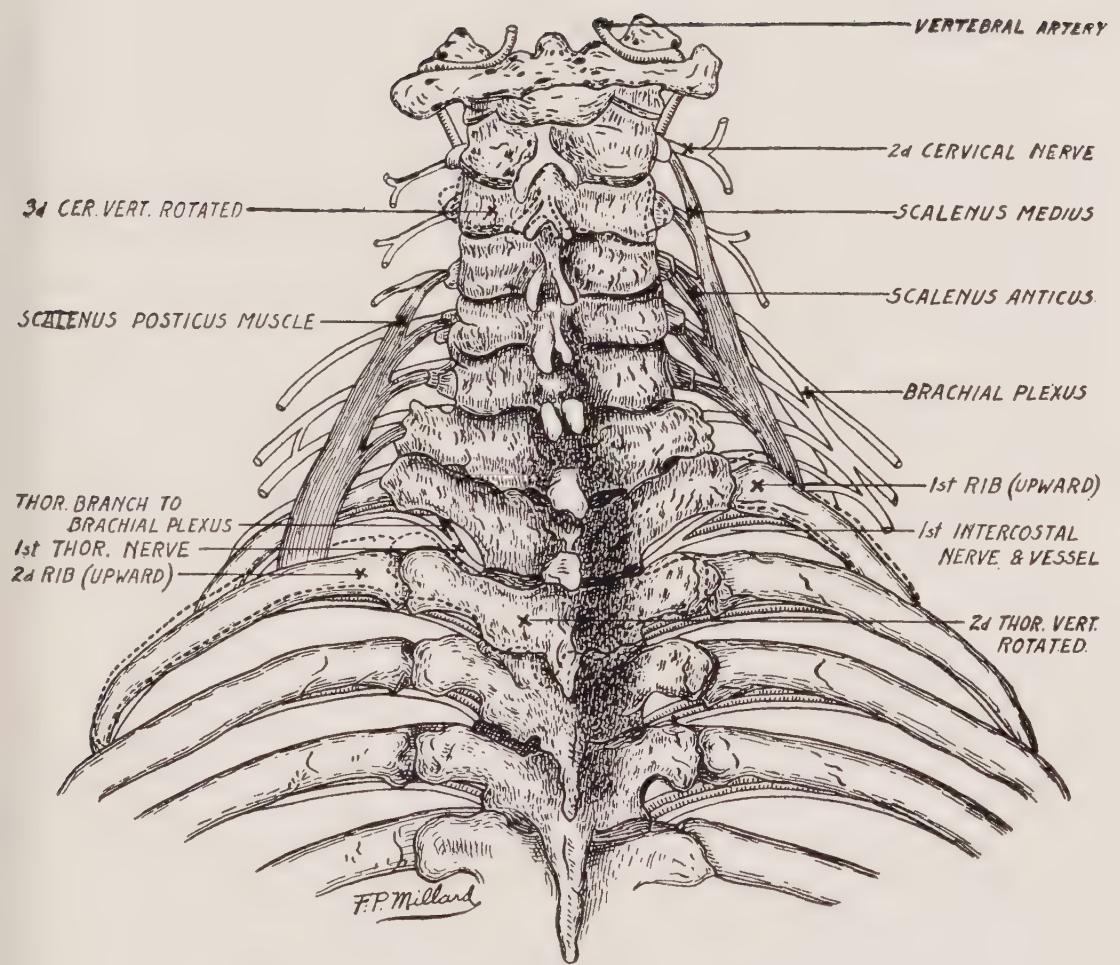


FIG. 5.

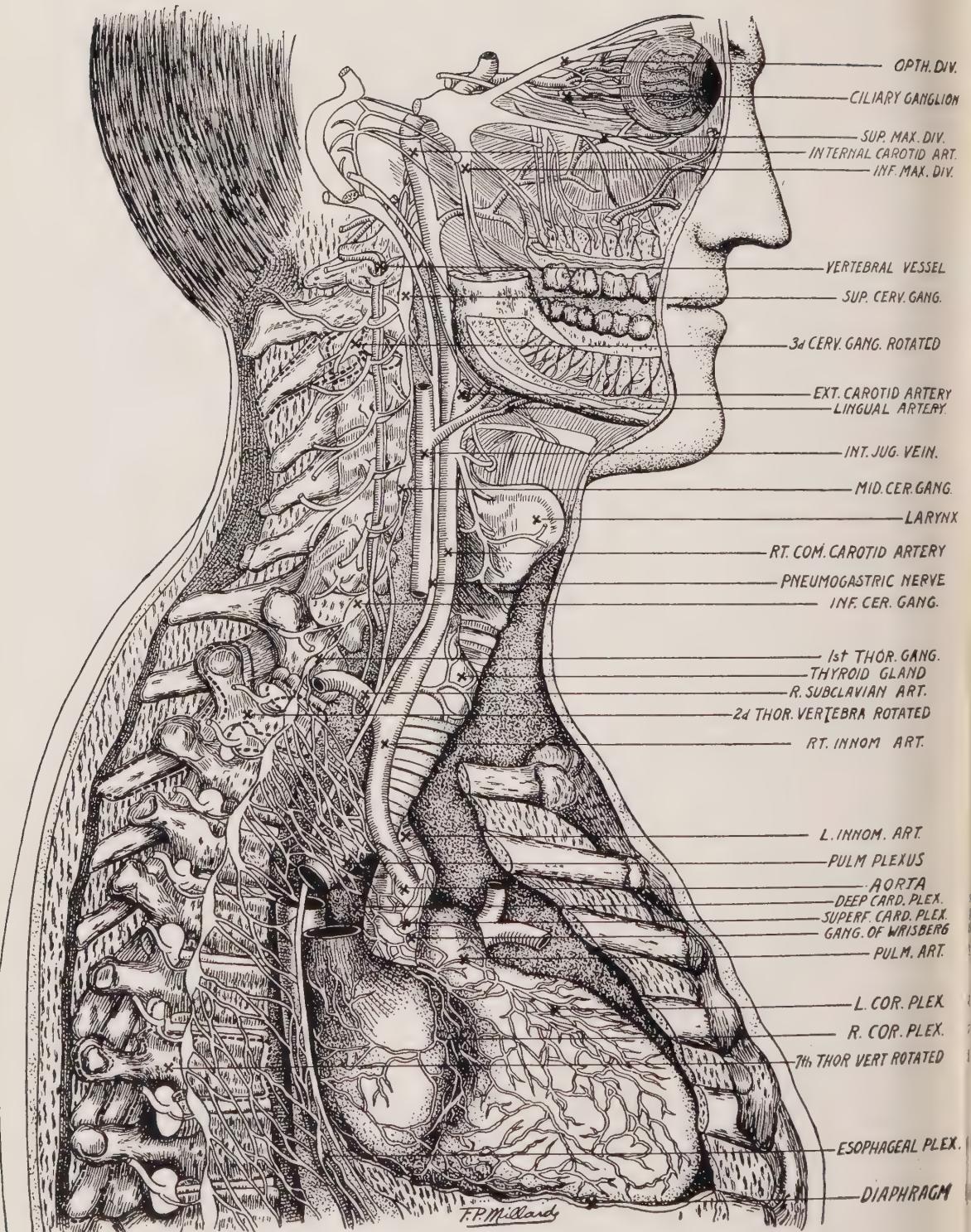


FIG. 6.

ments, that the vertebrae are placed one directly on top of another, that they must support the entire weight of the body and are involved in its every movement; then when one considers the many jars, falls, wrenches, sprains and injuries since infancy, he realizes the enormous possibility of strains and displacements to these joints over the other larger and stronger joints of the body. These displacements do, in fact, occur more frequently, and the parts supplied by the nerves and blood vessels connected with the joints become correspondingly impoverished and actually diseased, or at least their resistance is weakened and they become liable to disease. The most important cause of disease is mechanical disturbance along the spine, and for two powerful reasons: because the spinal joints are in themselves peculiarly liable to derangements, and because the spinal joints are, through the nerves, in such intimate and vital relation with all other parts of the body.

What person has not experienced the tingling of his fingers from pressure on the "crazy bone"? You have then realized that when the nerve was irritated at the elbow, the effect was referred to the termination of the nerve. Reasoning along the same lines we may logically expect and do find similar effects on the more delicately organized tissues of the heart, the lungs, or other

internal organs, when there is irritation to the nerves supplying them.

In Fig. 5 there is represented a twisted, i. e., rotated, third cervical vertebra. Such a condition is as certainly met with as is a dislocated hip. It requires no stretch of the imagination to see how this delicate joint might be strained or misplaced if the larger and stronger hip-joint be subject to such derangements. This condition is one often observed by the osteopaths and a reference to Fig. 6, showing the nerve connections from the upper part of the neck, will enable anyone to see that headaches, eye troubles, facial neuralgia, catarrhal conditions of the head or other such conditions might result through this nervous disturbance. This vertebra is taken as typical of a possible derangement or misplacement in this or any other direction. Such conditions usually result from falls, though it often happens that some muscular strain, some quick or awkward movement, will produce the described effect. In this illustration (Fig. 5) there is also, it will be observed, a misplaced rib. Such a thing does occur, but not without causing some direct or reflex trouble. Another rotated (second dorsal) vertebra is also shown. It is not a difficult thing for the skilled osteopath to diagnose these conditions. Certain bony points are compared critically with certain other points and the correct or

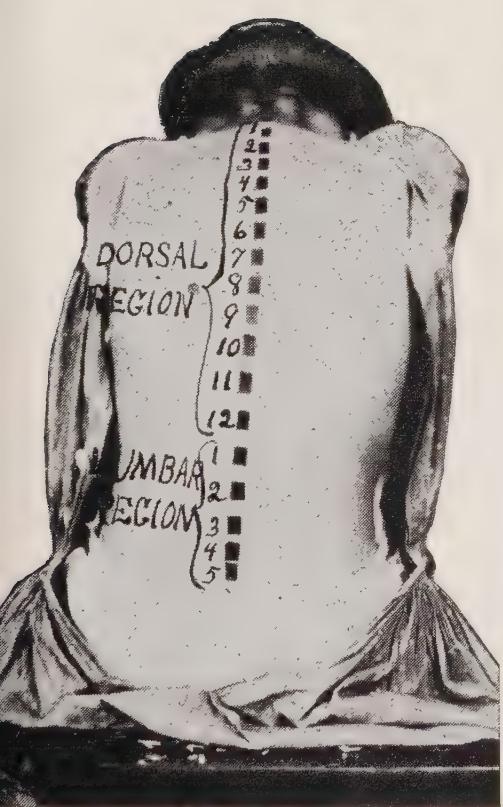


FIG. 7.



FIG. 8.

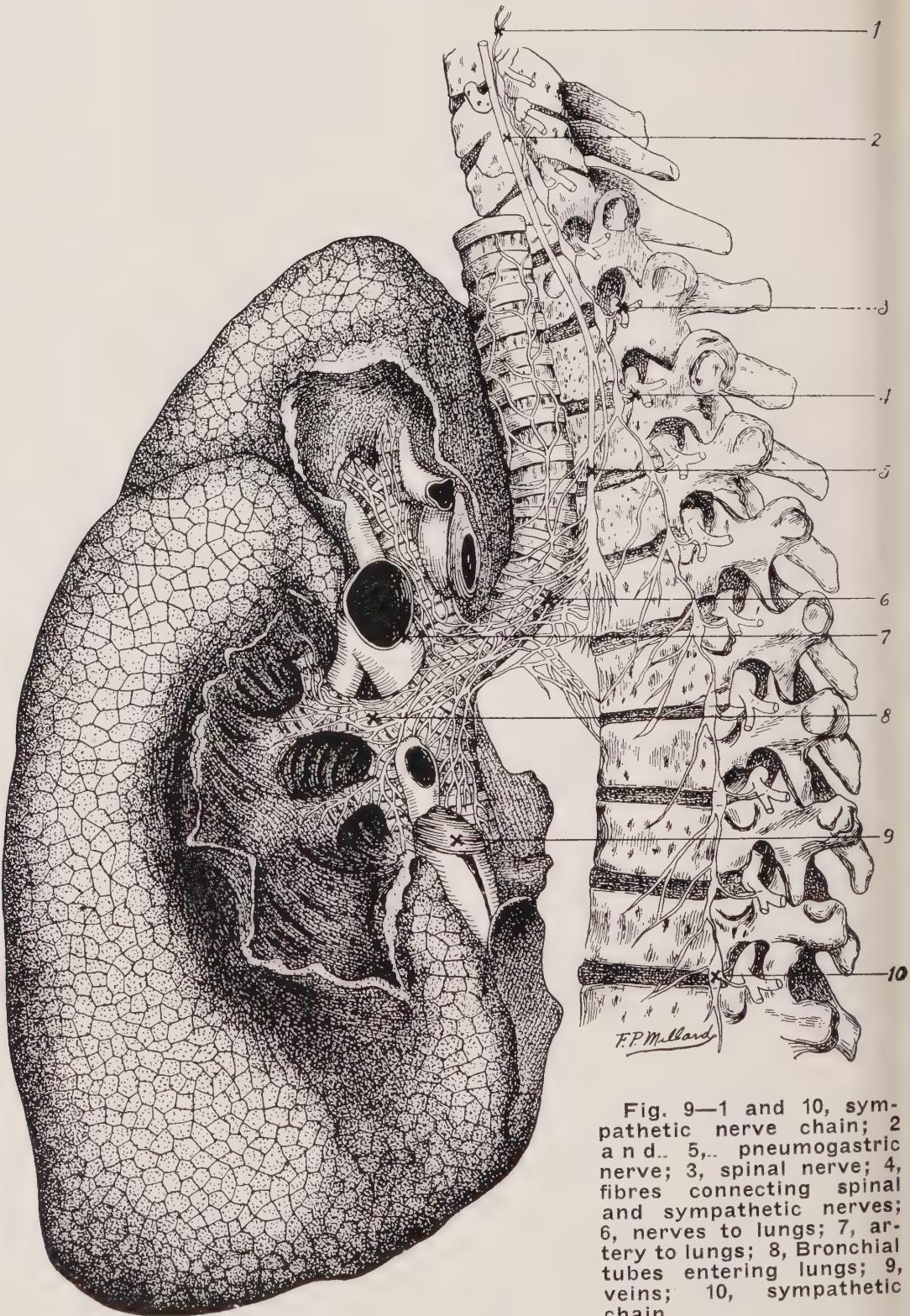


FIG. 9.

Fig. 9—1 and 10, sympathetic nerve chain; 2 and 5, pneumogastric nerve; 3, spinal nerve; 4, fibres connecting spinal and sympathetic nerves; 6, nerves to lungs; 7, artery to lungs; 8, Bronchial tubes entering lungs; 9, veins; 10, sympathetic chain.

disturbed relation of all parts is established. It embraces precisely the same principle employed in surgery in diagnosing a displaced shoulder or hip. However, it is only the osteopathic physician who is trained to be alive to the recognition of these slight differences of position or trained to correct them.

In Figs. 7-8 are seen some of the actual abnormalities that are found and corrected daily by osteopathic physicians in practice throughout the country. In these pictures you will observe that the anatomical irregularities are often gross enough to be observed through the soft tissues of the back. There are many others, not visible, that are nevertheless found and corrected by the skilled fingers of the osteopath. Naturally you are moved to ask why the doctors of medicine themselves have never heretofore discovered these things and announced their connection with disease. Frankly, I do not know any more than I know why during the many centuries that human bodies and animals were dissected, the true nature and cause of the circulation of the blood was never discovered until the time of Wm. Harvey. I might answer you in the language of one of their own number, who says, "what they cannot perceive through clumsy and ill-trained fingers they are inclined to deny." These conditions are not figments of the osteopathic imagination, for both dissection and the

X-ray have in innumerable instances verified the findings of the trained touch of the osteopathic physician.

Proceeding a little further down the spine we come to its lung connections, as shown in Fig. 9. Here we find disturbances that may lead to asthma, chronic bronchitis, and pleurisy. We may even find as well predispositions to acute lung troubles, because by the irritation from these "lesions" the resistance of the lung tissue is lowered. Here may be illustrated the osteopathic idea of the part that germs play in the production of disease. For instance, the lesion in the lung area could not of itself cause tuberculosis, or pneumonia, for there must be a specific germ present in either disease, but the lesion could so lower the vitality of the lung tissue that the latter could not resist or overcome the germs of tuberculosis or pneumonia as do the lungs of the individual who has no spinal derangement at this point. The recovery from these diseases, if it occurred, would be much more difficult in the patient who had the lesion. A displaced rib is shown in Fig. 10; this when occurring on the right side causes a train of symptoms so closely resembling appendicitis that surgeons have often operated for it. It is also the fruitful cause of pains in the side. Here is also shown, as well as in Figs. 11 and 12, one of the most important lesions in the entire body, a displaced innominate bone. In

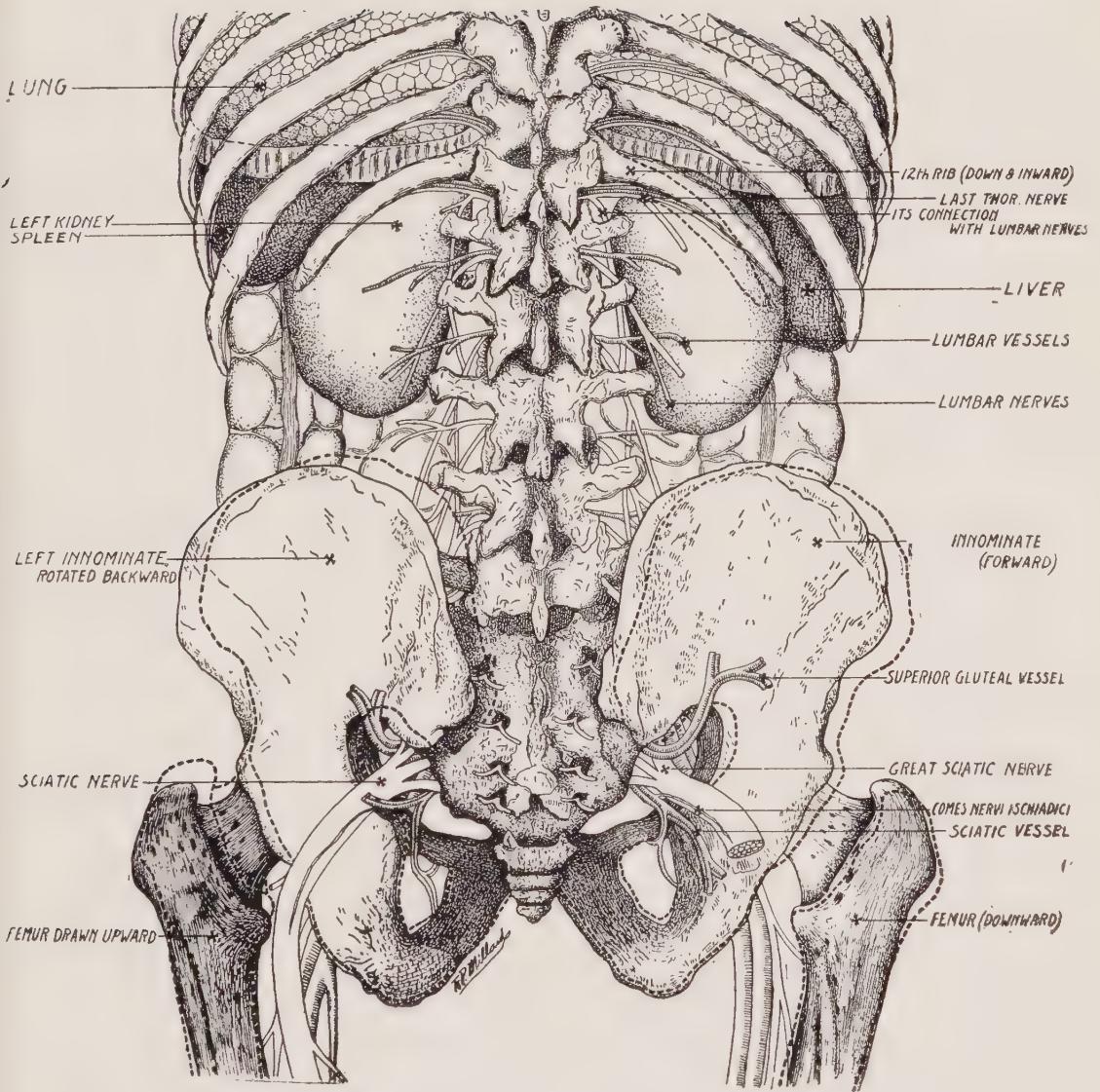


FIG. 10.

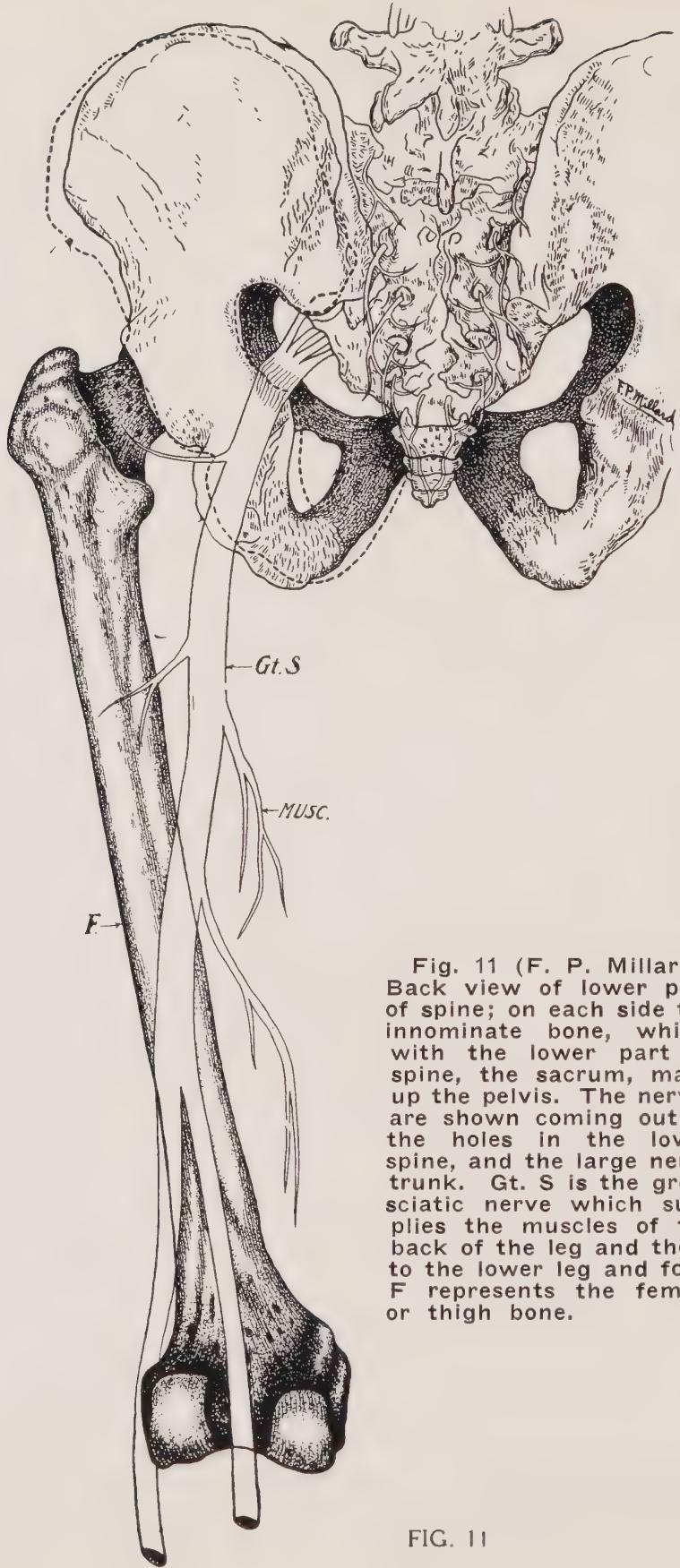


Fig. 11 (F. P. Millard),
Back view of lower part
of spine; on each side the
innominate bone, which,
with the lower part of
spine, the sacrum, make
up the pelvis. The nerves
are shown coming out of
the holes in the lower
spine, and the large nerve
trunk. Gt. S is the great
sciatic nerve which sup-
plies the muscles of the
back of the leg and those
to the lower leg and foot.
F represents the femur,
or thigh bone.

FIG. 11

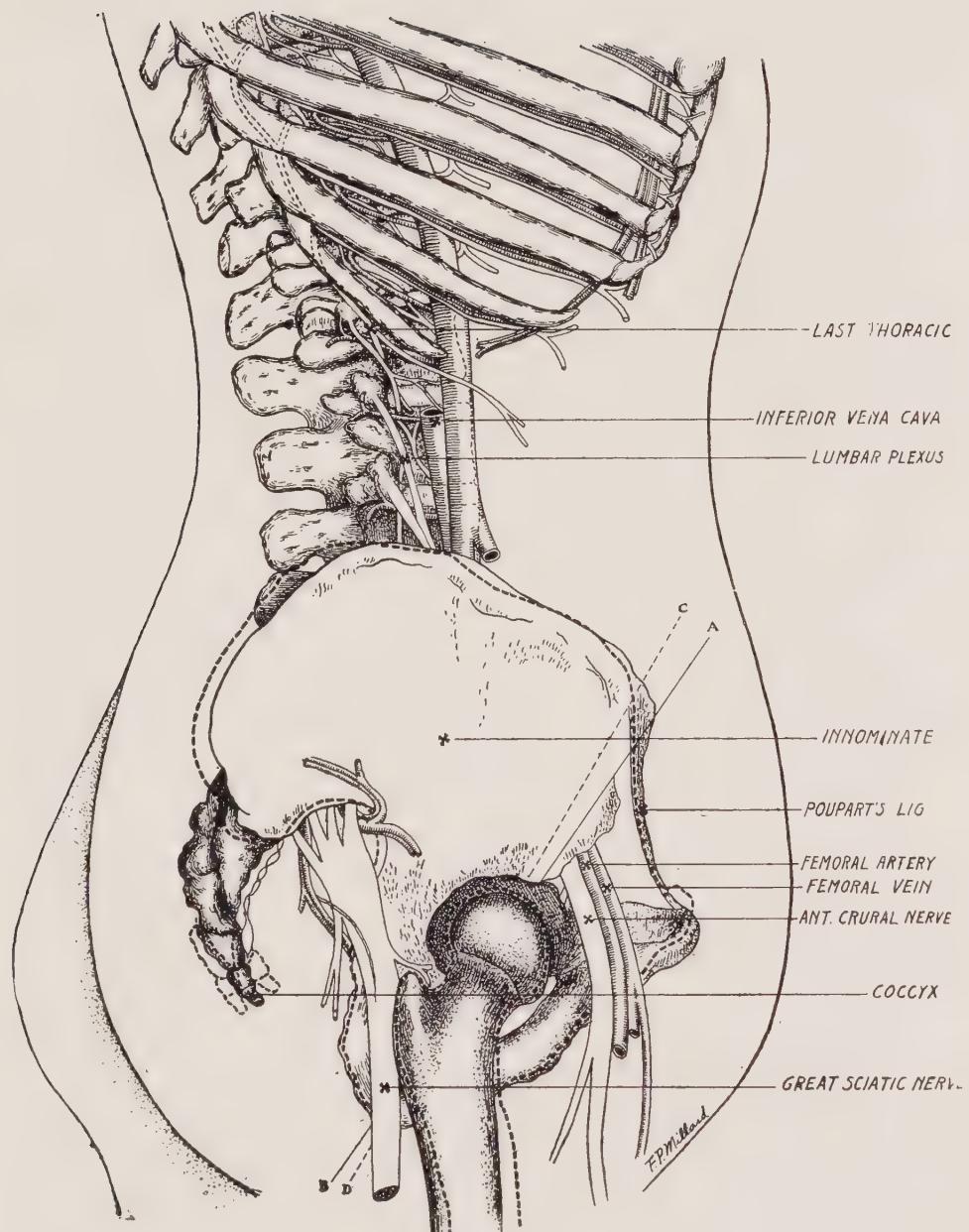


FIG. 12

the past four or five years the "regular" medical profession has stumbled upon the occurrence of this condition and has tried to appropriate it as an original discovery of its own. Osteopathic literature abounded in mention of this condition, years before the "regulars" had ever heard of it, and in fact while they were strenuously denying the possibility of any derangement whatever at this point. Bearing in mind the strong muscles attached to this bone from the spinal column above and from the legs below, one can readily appreciate the many and widespread disturbances that may arise at this point from derangements. Intense and persistent back-aches, sciatica, lameness, and diseases of the internal pelvic organs, are some of the numerous conditions that are cured by correcting misplacements of bones in this region.

These conditions might be traced on and on, until we had covered all the diseases to which the human body is heir. Every misplaced or strained joint, or any misplaced tissue becomes a central point from which go irritating and resistance-reducing impulses. The effects upon the internal organs likewise could be traced, for each spinal nerve has its definite connections with external tissues and internal organs.

OSTEOPATHY

A Comparison

There are in vogue at the present time three prominent methods or schools of treatment, the medicinal, the mental, and the manipulative. To the end that the modus operandi of these schools of practice may adequately be understood, a brief resume of the formation, the principles of nutrition, and the defensive powers of the body is a necessary introduction.

The human body develops from a single cell so small that it is invisible to the naked eye, and so minute that it can be studied only under a high power microscope. In the course of development these tiny cells begin to differ one from another, and from these cells multiple tissues and organs, bone, muscle, brain, and blood, with all of their respective functions are formed and evolved.

Each cell is in itself a vital unit. The health and activity of any organ is the sum of the health and activity of its individual cells. The different parts of the body are united and controlled by the nerves, themselves cells with long prolongations. These nerve fibres connect the cells of the different organs with the great governing

center, the brain, by which all their activities are controlled and regulated. Thus it becomes evident that any interference with the nerve connections of a single cell or group of cells causes interference with their every function, and may initiate their sickness or induce their death.

It is said that life began as a single cell, in the waters of the briny deep. Be that as it may, it is none the less a fact that each cell of the body must bathe in a fluid, the blood, a portion of which wonderfully resembles sea water. Each cell receives its food supply from the blood and pours into it its waste material. Thus it is that the blood stream brings food and carries sewage. It carries throughout the body elements of life-giving food as well as death-dealing poison. If any cell or group of cells is deprived of this contact with the blood stream, it dies a three-fold death; a death of starvation because it receives no food, a death of poison because it is soon killed by its own excreta, and a death of thirst because it is deprived of its briny bath. Cell health is impossible without a good circulation of pure blood, and bodily health in turn is dependent upon cell health.

The blood is manufactured from the food we eat, the water we drink and the air we breathe, and from these it is constantly receiving cell food by the processes of digestion and assimilation. It is constantly pass-

ing through the kidneys, liver and lungs, the office of each being to rid it of certain poisons. The blood is therefore continuously being prepared from the food and constantly being purified by the eliminating organs. Nothing else than pure air and pure food and pure water can add to its health-giving properties, nor is any foreign material necessary for its purification. Thus the blood presents a "balanced ration" for cell use and the addition of anything other than air and food and water is a pollution rendering it unfit for cell food.

The blood is itself composed of red and white blood cells, together with a liquid portion called serum. The red blood-cells carry oxygen, fuel, to the tissues. The white blood-cells are the soldiers, the standing army of the body. Besides this they are the repair men and the scavengers. They have the power of independent motion and can leave the blood vessels and wander about at will in the tissues. Here their function is to attack and destroy invading germs and to devour particles of dead foreign matter. They form a defensive army against living enemies from without, and whenever germ invasion threatens or occurs or an injury is received they rush like trained soldiers, in great numbers, to destroy the invading host, to repair the damage, or to remove the debris and the wreckage from the scene of disaster. Often

many of them succumb in the struggle and their dead bodies form pus or "matter" so often observed after injuries. They are an embodiment of the healing power of nature, and recovery from infectious diseases is due largely to their activity. That many drugs weaken or destroy their powers of defense is positive proof of the harmfulness of drug medication. While the other cells are not such active defenders of the body, they are indispensable assistants and possess great powers of resistance.

In the blood are present other substances, originating perhaps in the white blood cells or perhaps in bodily organs, which have the power to resist or to destroy the germs. These substances neutralize the poisons produced by germs, they retard their movements, dissolve them, and digest them in preparation for the white blood cells to devour. They are known as germicides, antitoxins, agglutinins, bacteriolysins and opsonins. So it is that blood is nature's own antiseptic, and germs disappear and health returns wherever it flows in proper quality and quantity.

Without discussing in argumentative fashion the philosophy of the medicinal methods, we may say that in the main they inculcate the introduction into the body of some outside agency, a foreign substance, usually a poison, to effect a cure. This they claim is "assisting Nature." This method has been in use

for centuries, regardless of the fact that marvelous advances have been made in every other department of medical knowledge. In anatomy, physiology, and the whole science of diseases, a wonderful development has been realized; yet during this time the plan of drugging the sick has continued without change, though thousands of remedies have been tried and proved useless.

Drugging was in vogue during the days when science was in absolute ignorance of the true cause and nature of the circulation of the blood. Harvey's discovery was a revelation, and in its light all medical books had to be rewritten; yet the practice of drugging the sick continued. When the body was declared to be made up of "a slimy and gelatinous fluid," drugs were given. After the microscope had demonstrated that the body was a commonwealth of cells, each cell a vital unit, anatomy and physiology were revolutionized; but drugs were still administered.

In the days before anything was known of the processes of digestion, assimilation or excretion, drugs were relied upon to cure. After experimentation with the stomach pump and the test tube had shown that all these vital activities were disturbed by drugs, their use still was unabated. Knowledge of the body has increased, the secrets of its silent processes have been made known, much of the mystery of disease has been solved, but

the practice, thousands of years old, of putting poisons into diseased bodies, has in this time changed not a whit in principle, and only in the kind and quantity of the poison administered.

A remedy once introduced into the system finds its way by absorption into the blood. Here it has no power to go exclusively to the diseased part, but must go to all parts alike. It must come in contact with each delicate cell. There is no assurance that it may not derange some unaffected part; on the contrary there is almost a certainty that it will result in some derangement. It is an axiom in therapeutics, as well as in physics, that for every action there is a corresponding reaction. Often the reaction from a dose of drugs entails a great deal more disturbance than the action does good. There is nothing but pure food and water that can be introduced without harm, and nothing else has the power to rebuild diseased tissues.

Remedies are given to "assist nature," but no one has yet been able to explain how nature can be assisted in an unnatural manner by the introduction of foreign and extraneous material into the body. These contaminate the blood upon which each cell must feed, cause it to cease to be a "balanced ration," and as a consequence cell health and nutrition suffer in proportion. In but the fewest diseases is there any claim that the

drug has power to kill the germs, and even in these cases there is great danger of killing the body cells instead. All remedies that are not foods must be eliminated from the body, and the introduction of a poison imposes an additional burden as well as irritation upon the eliminating organs.

Internal remedies are uncertain and undependable. There is no power to control their action or to limit the consequences of such action and the results are never the same in any two instances. Out of the thousands of remedies given there are less than half a dozen of the so-called "specifics" whose action can be thoroughly relied upon. They are poisons that require great care in their dosage for fear of causing death. They are harmful when given to well people. They do not remove causes, they merely mask symptoms.

We search in vain for any consistent fundamental principles in drug administration. The tenets of today become the heresies of tomorrow. Bleeding, that was once used for nearly all diseases, is now declared to be pernicious. Famished fever patients who were once denied water are now allowed all they desire. Antimony, once the reliance in many diseases, is now seldom given. Calomel, once the mainstay for causing activity of the liver, is now declared by the best authorities to have no such action. The persecuted of a

few generations ago are the heroes of today. No one knows but that Friedmann, of anti-tuberculosis-turtle-serum fame, may yet have a monument erected to him. He undoubtedly will achieve such laurels if medical history repeats itself.

The Homeopathic system of drug medication originated about the year 1800. Its fundamental principle was that the patient must be given a remedy that would in health produce symptoms similar to those from which he was suffering. Only one remedy should be given at a time and that in the minutest quantity. The subdivision, or "potentizing," the remedy immensely developed its power for cure: common table salt in a crude state is inert; but when given in the 30th potency (one grain divided by thirty, ten times, represented by a fraction whose numerator is one, and whose denominator is one followed by thirty ciphers), it becomes a powerful remedy. This is claimed to be true of other inert substances, such as ordinary charcoal. These potencies have been run to 1,000 or even 1,000,000, but it is claimed that when thus *diluted*, "they represent such an extreme power that only men of the highest skill in homeopathy dare use them because of the risk of incurring possibly disastrous results." (Boericke & Anshutz, Elements of Homeopathy). The logical conclusion of this reasoning brings us to the absurdity that the

smaller the dose the greater the danger, or if the patient only takes *little* enough of a sufficiently *harmless* remedy the results might prove exceedingly disastrous.

The dosage was in point of fact reduced to such infinitesimal proportions that it was presumptuous to expect any effect from it whatever. The fact was evident that if the dosage of the “regulars” was necessary, then the dosage of the homeopaths was absolutely without effect. On the other hand, if the homeopathic doses were effective (and the results from this treatment were altogether as good as these of the “regular” school), then the enormous doses of the “regulars” were certainly unnecessary and harmful. This conflict between the two principal schools of drug medication demonstrated clearly that drugs were unnecessary for cure; and, in this way, homeopathy has been a great boon to the human race, and has prepared the public for the favorable consideration of the drugless methods of healing.

Of the non-material methods, Christian Science is best known. Its fundamental principle is that, “nothing is real but mind. Matter and sickness are subjective states of error that can be dispelled by a true knowledge of God and Christ.” To the reasoning of this cult, small-pox is a “subjective state of error,” as is likewise the idea that the disease is contagious. So too, perhaps, is

your neighbor's burning house, and the idea that your own, adjoining it, will catch fire.

Whatever else may be said of it, this school has done great good in calling attention to the healing-power of mental attitude in diseases, and has been instrumental to a great degree in furthering the development of scientific psycho-therapy. There is nothing new in their methods of healing, nor have they ever effected any cures that have not been duplicated by other psychic methods.

Those appealing in behalf of osteopathy do not ask you to accept that which you cannot perceive, nor to deny the indisputable evidence of the physical senses. Osteopathy is the recognized manipulative method of cure. Its principles are in accord with all the findings of science. It embraces the marvelous revelations of the microscope and all the discoveries in anatomy, physiology and disease manifestations. It recognizes the cell as the basis of life, of health, and of disease, and that cell health depends upon a free flow of nerve force and an unobstructed blood supply. These conditions can obtain only when all parts of the body are in perfect position. The fundamental principle of osteopathy is that structure must be perfect, all parts of the body in proper place, in order that function be perfect; or, in other words, "structure determines function."

Osteopathy maintains that poisons cannot

make health. Health can come only from a proper quantity and quality of nature's great nutrient and antiseptic, blood. This is possible only with unobstructed nerve paths and open blood channels. The purpose of osteopathic manipulations is to secure these conditions.

Osteopathy is based upon the demonstrable fact that when the body cells have a perfect supply of good blood and are in communication with the brain through the nerves that they perform their duties promptly and efficiently and are invincible to their ever-present enemies, germs.

Osteopathy assists nature in a natural manner and does not derange unaffected parts. It adds no contamination to the blood and imposes no additional duty upon the eliminating organs. There is no danger of poisoning a patient nor making a drug fiend by its ministrations. There is no harmful or unpleasant reaction from its use; its action is as certain and dependable as are the laws of anatomy and physiology. More than all else, it is essentially a treatment for the removal of the primary, causative factors in disease.

LABORATORY PROOF OF OSTEO-PATHIC THEORIES

Osteopathic theories had been put to practical and convincing tests for many years and the results demonstrated had been uniformly successful and satisfactory. The osteopathic profession had insisted that "lesions" and anatomical irregularities of the body machine, of the spine especially, were actual occurrences, for they had located them, removed them, and restored their patients to health. While all this was convincing to the average mind there was still lacking the indisputable evidence of scientific demonstration, evidence which the judicious mind had a right to demand. If osteopathic theories had a correspondence in fact, then they were capable of proof; it was proof alone that would satisfy. Knowing that their method must stand or fall by the results of scientific investigation, and assured that theory must ultimately clash with reality, the osteopaths themselves demanded facts.

For the conduct of necessary tests and experimentation, modern laboratory facilities and equipment equal to that of the institutions of highest scientific attainment, were necessary. For this purpose the osteopathic

physicians of the world have out of their own earnings subscribed \$100,000 as the beginning of a \$1,000,000 fund to endow the A. T. Still Research Institute. (Fig. 13). This institution was chartered to "perfect the application of osteopathy and to extend its possibilities of service to mankind." Unlike other research institutes it first appealed, not to the public nor to millionaire philanthropists, but to the members of its own profession for requisite funds. Sufficient funds have already accrued to the foundation, to justify the employment of several trained laboratory workers. Through these experiments the original contentions of the osteopaths have been verified, and osteopathy has been demonstrated the most rational, scientific and dependable method of treating diseases yet conceived. These workers have gone to the heart of the contention, produced the lesions (derangements of structure), have later shown their presence by dissection, and have demonstrated beyond cavil that the lesion is the primal cause of the disease. They have further proved beyond peradventure or question that the activity of the internal organs can be normalized by manipulation of the governing spinal centers, and that the bodily resistance to disease can be increased by osteopathic treatment.

In this work more than 500 animals,—dogs, monkeys, cats, rabbits and guinea pigs—have

been operated on and scientifically and persistently studied to determine the effect of the osteopathic lesion and the results of osteopathic adjustment. These animals were anæsthetized and slight strains or malpositions of their spines produced. These injuries were so slight in character as to be no greater than those found in the human body in daily practice. In no case was violence used, there was no displacement of joints or fracture of bones or laceration of the soft tissues. The avowed object was the production of a slight slipping or maladjustment of the spinal joints, the ordinary osteopathic lesion as every day observable in the human body. As a rule the animal was not in the least disabled, or at most, he recovered in a day or two. A trifling ineptitude, a slight soreness or stiffness at the seat of the injury, and some sensitiveness to touch remained, as is usually found in the human subject.

The animals were watched for a variable length of time, from three to eighty days, and were then killed with chloroform. They were examined under the usual exacting conditions of a post mortem, and the findings were tabulated. On examination it was found that the ligaments and other soft tissues about the joints had been strained, stretched, congested, and inflamed. All the nerve tissues of the spinal cord, the nerve roots and the nerves and their branches corresponding to the seat

of injury showed diseased changes, congestion, inflammation, and even degeneration. The blood vessels in the injured area were engorged and their walls were thickened.

The most significant fact was that the internal organs whose nerve supply came from the damaged area showed marked changes. These changes corresponded *definitely to the paths of the nerves supplying the respective organs.* When the nerves controlling the stomach and intestines were involved the powers of motion, secretion, and digestion in these organs were altered and lessened. Their lining membranes were congested and inflamed. The results when the kidney centers were involved were just as positive. Congestion and inflammation with all the attendant changes of acute Bright's disease resulted. The correction of the maladjustment in these cases caused a subsidence of the symptoms. Derangements of the liver and spleen were found when the maladjustments were caused in that region of the spine from which they receive their nerve supply. In other cases the pancreas was acutely disordered. In these cases an analysis of the urine showed that it contained sugar, an evidence of diabetes. Goitres are produced in several animals when the spinal injuries involved the nerves supplying the thyroid glands. Goitres thus produced were cured by correcting the derangement in the same

animal. All the changes in the internal organs were of an acute character and corresponded accurately with the spinal or rib derangement.

From these cases the following are reported as typical:

In one animal, two weeks after the operation, the third, fourth, and fifth ribs on the right side were found to be dislocated upward at their vertebral ends. There was the usual ligamentous and muscular tension in the affected area, as well as a great deal of congestion in the nerves and in that region of the spinal cord. This dog was sick and inactive for a week following the first forty-eight hours after the operation. The spleen was swollen to twice its normal size.

In one instance the lower and middle dorsal regions were sprung forward with only moderate force. Six weeks later a separation was found between the tenth and eleventh dorsal vertebrae. The fourth and fifth ribs on the right side were sprung upward at their vertebral ends. The muscles and ligaments contiguous to the injured area were very tense and rigid. There was found a stricture of the small intestine, and the spinal nerves between the tenth and eleventh vertebrae were congested.

In another case a lateral twist between the third and fourth dorsal vertebrae was pro-

duced, and the vertebral ends of the third and fourth ribs were subluxated upward. The usual rigidity and tenseness of the tissues was found. This dog lost much flesh and was very sick from twenty-four hours after the operation until the time of dissection. The stomach walls were thin and dilated and a large area at either end of the stomach was found noticeably congested.

In still another case, nineteen days after the production of the lesion, twists between the second and third and between the fourth and fifth dorsal vertebrae were found. The nerve roots, the nerves, and the corresponding part of the spinal cord were still found to be congested. The dog was ill, suffered from excessive thirst and loss of appetite and flesh. The spleen was found to be slightly enlarged and two-thirds of the stomach area showed marked congestion.

In still other cases experiments upon every one of fifteen dogs showed some disturbance from the lesions produced. These disturbances varied from slight changes in the urine to conditions sufficiently severe to cause death. The lesions were produced in the middle and lower dorsal regions. Evidences of diabetes, sugar in the urine, appeared in every animal operated thus, and continued for a period of two to seven months. In some of the animals in which the lesions were corrected the symp-

toms disappeared to return when the lesions were reproduced. Either diarrhoea or constipation occurred in eight of the fifteen dogs, and in four the diarrhoea was of severe type. Vomiting occurred in five. It must be remembered that the experiment included other "control" dogs under identical food and care and surroundings, and these latter showed no unusual symptoms whatever. And it should be made plain that the lesions produced at the same point in the spine made one disease, or affected one organ, and those at another point; lower or higher, always affected another organ.

In a series of experiments upon monkeys, selected because of their close resemblance in structure and function to the human being, very remarkable results were secured. These animals were kept under observation for several weeks before they were operated upon, to insure that they were in a healthy condition. With one isolated exception they either retained their weight or gained flesh during this time. After the lesions were produced *every animal operated upon lost weight; and this loss in weight was regained after the lesions were corrected.* There was about the same proportion of intestinal disturbances and diabetic symptoms as occurred with the dogs. A most remarkable feature of these experiments was that not merely once or twice but even three

times in the same animal intestinal disorders were cured by adjusting the lesion and caused again by reproducing it. As in the case of the dogs, other monkeys kept in similar cages, on the same diet and the same general care, showed no evidences of disease whatever. More conclusive evidence that spinal irregularities cause disease cannot be produced. These experiments demonstrate scientifically and undeniably not only that the lesion does cause disease but that the correction of the lesion cures disease.

A prominent medical writer has said, "The body is like a piano or a harp, to be played upon at will. All that is needed is to work out the principles on a practical physiological basis." This physiological basis the experimental department of the A. T. Still Research Institute has worked out. By experiment upon the human being and the lower animals they have established unmistakably many centers along the spine, by the manipulation of which differing effects can be produced upon the several internal organs of the body. It has been scientifically proved by experimentation that the proper application of osteopathic manipulations can increase or decrease general blood pressure as may be desired. It has also been demonstrated that by similar means the activities of the kidneys can be increased from twelve to one hundred per cent., and the flow of the

bile from thirty to ninety per cent. The osteopaths have proved the proposition of the medical writer that the spine is indeed the keyboard of this wonderful instrument, the human body, and the nerves and nerve centers are the strings of this harp, through whose instrumentality the osteopathic physician is enabled out of discord and disease to bring forth harmony and health.

It has been ascertained that the blood contains substances whose effect upon germs is to render them more easily destroyed by the white blood cells. These substances have been named opsonins because they seem to prepare the germ cells for digestion by the white blood cells. The degree of their activity is called the opsonic index. Experiments have conclusively proved that osteopathic manipulation of the liver and spleen increases the opsonic index, or the resistance of the body to germ action, to a marked degree. This affords explanation of the splendid results obtained by the osteopathic practitioner in the treatment of germ diseases, such as typhoid fever, la grippe, pneumonia, diphtheria, scarlet fever, measles, or meningitis.

These experiments are being continued at the A. T. Still Research Institute to extend the possibilities of osteopathic service to mankind. Since its organization many grateful patients have contributed to its endow-

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ment. It now affords to those who wish to contribute to a great educational and philanthropic movement one of the greatest opportunities of the times.

OSTEOPATHY IN ACUTE DISEASES

It is a significant fact that Dr. Still was a general practitioner and by the nature of his profession his practice consisted in treating diseases of all kinds and of every degree of severity. He was unable to select certain diseases to treat but had to care for them as they presented themselves.

The work of a general practitioner consists, for the greater part, of acute diseases, and it was to combat these that osteopathy was originated and developed. The first patients to whom osteopathic treatment was administered were those ill of acute disorders, as fevers, pneumonia, and dysentery. The results in these cases were so extraordinary that chronic diseases, the acknowledged failures of the other schools of healing, challenged the new treatment. Proving so successful in these, in which other methods had proved useless, the demand for their treatment was so great that osteopathy has come to be known, largely, though erroneously, as especially adapted to chronic diseases.

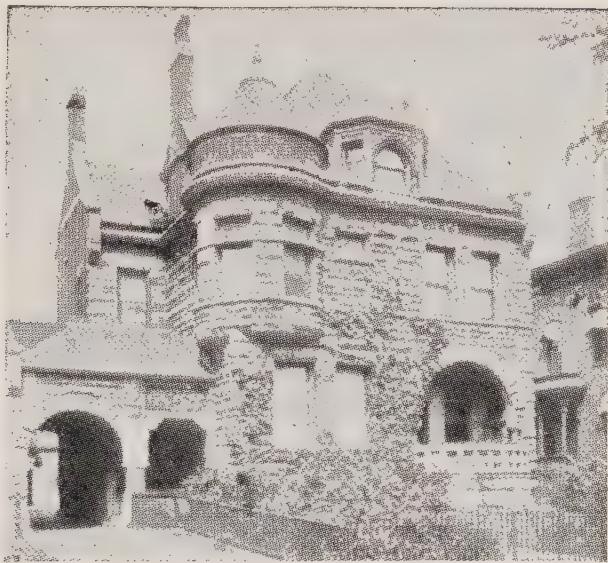
From the origin of osteopathy it is readily appreciated that the treatment is applicable to that wide category of diseases coming

under the care of the general practitioner. It is neither a remedy for a single disease, nor a special method applicable to some particular class or group of diseases, nor a part of medicine or surgery, but it is a SYSTEM of treatment, broader in its application than the practice of drugs, and adapted to all curable diseases, whether acute or chronic.

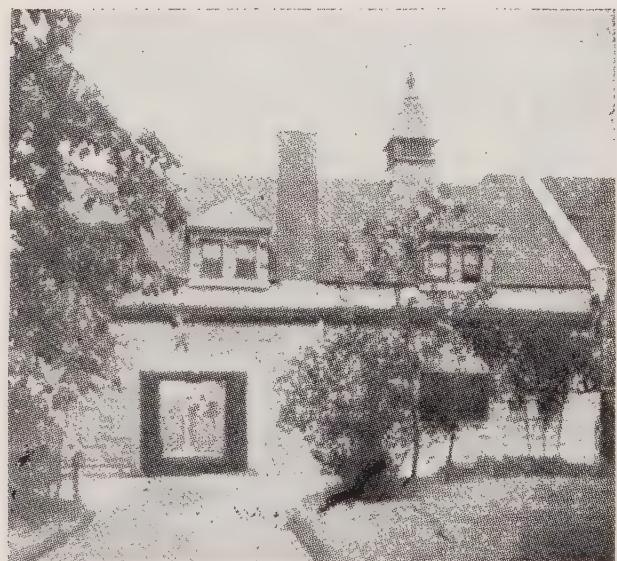
The terms acute or chronic, as applied to diseases, have reference only to duration. An acute disease is, relatively speaking, one of short duration, usually of abrupt onset, and perhaps of a severe course. A chronic disease is one of relatively longer duration, more gradual onset, and perhaps a less severe course. Many diseases pass through an acute stage before they become chronic, and are as a matter of course more easily cured in the beginning than after they have become well established.

While osteopathy has won its greatest renown as a cure for chronic diseases, it is in acute troubles that its most brilliant successes and quickest results are seen.

The unfounded objection is sometimes offered that the results of osteopathic treatment are too slow to be of service in acute diseases. The fact is that the response to osteopathic manipulations follows as quickly as the tingling in the fingers follows the blow on the "crazy bone," or as promptly as anger blanches the face, or a feeling of shame



Home of the A. T. Still Research Institute.



Building for Experimental Work.

FIG. 13.

flushes the cheek. The response is immediate, simultaneous with the treatment, and comes as rapidly as a nerve can respond to an impulse, or the blood stream course through the diseased part. The curative impulse once initiated is reinforced by nature's inherent recuperative powers and is continuous. There is no waiting for the action of the remedy until it is absorbed and distributed by the blood current. Such would occupy an interval of from fifteen to thirty minutes even when administered hypodermically, and from one to twelve hours where given by the mouth. The response, too, is dependable, because it is based upon anatomical and physiological laws and is far different from the blind experiment of putting a poison into an organism, the reaction of which no man can foretell. There is no fear of an idiosyncracy by which a dose harmless to one individual may prove fatal to another.

Surprise is sometimes expressed that the osteopathic physician should claim to effect internal conditions in fevers, internal inflammations, or acute diseases. Often those expressing surprise at this claim accept without question and with remarkable credulity the glaring fallacy that poisons,—substances, which if given in health, cause disease, are able when given in disease to restore one to health. There is no microscope, no X-ray, nor other contrivance of man, able to follow a

dose of drugs through the laboratory of the human body and to solve the mystery as to what change the drug undergoes, or where the change takes place, or what effects it has and how they are produced, or to measure the possible harm from this seeming good.

It has been said that the essential feature of osteopathy is *adjustment*, yet there are instances where it may be inexpedient or inadvisable to attempt to secure adjustment. This sometimes occurs in severe and acute illness. Under such circumstances, the osteopathic physician has very definite and reliable resources at his command. There are along the spine certain nerve centers from which pass out nerves controlling the internal organs and tissues. By the manipulation of these centers the internal conditions are controlled naturally and effectively. The existence of some of these centers is common medical knowledge, while the location of many of them has been demonstrated by the osteopaths through experiments upon lower animals and the human being. The effects of correct manipulation of these centers are harmless and in accord with the natural and known laws of physiology. They are uniform and demonstrable and belief in their action does not require the credulous acceptance of an unsolved riddle.

The success of osteopathy in the treatment of chronic diseases can not be questioned. It

is reasonable to suppose that any method successful in diseases of long standing, that is, in chronic cases where the vitality was low and recuperative power was weakened by continued illness, would prove more successful in diseases of recent occurrence, that is in acute cases where the vitality was vigorous and the recuperative power active. Such reasoning is borne out by facts.

It is a matter of constant comment that the best doctors of medicine are giving the fewest drugs. It is no uncommon thing for a case of pneumonia, typhoid fever or other acute disease to be treated by medical men without the administration of a dose of medicine. The doctor has merely acted in an advisory capacity in the case and other than this whatever good he has done has been negative rather than positive. The good is in what he has *not* done rather than in what he has done. He has wisely done nothing because he knew that his remedies were capable of much harm. The osteopathic physician, educated as thoroughly as he is in the natural history, the course, the diagnosis and the management of diseases, is just as capable an advisor and has in his skilled fingers and his knowledge of the structure and working of all parts of the body and the nerve centers controlling them, means of *positive* good. He can set free nature's pent up reparative forces, liberate the natural

antitoxins, bactericides and opsonins, stimulate by natural means sluggish and inactive organs, repress those that are over-active, and by these means cause a cessation of the ravages of disease.

Nothing the medical man does that is of proven value is omitted by the osteopath. Nursing, dieting, bathing, and all hygienic or sanitary measures are employed. And nothing that the former does that is capable of harm, the injection of poisons into an already diseased body, does the latter fail to omit. All the indications for which drugs are given are adequately met by osteopathic treatment; the relief of pain, the reduction of fever, the quieting of nervousness, the production of sleep, the stimulation of organs for the elimination of poisons, the stimulation of liver, kidneys, heart, or the repression of an overactive organ. All this is effected without the danger or discomfort of disturbing one part in the hope of affecting another favorably.

Sometimes the uninitiated, while watching a rather vigorous treatment will say: "My! I couldn't stand that." The assertion is true. Neither could the critic wear another's clothes. The question is sometimes asked, "do you treat babies?" When told that we do, the next exclamation is, "like that?" Certainly not! No more than medical men would give the infant and the adult the same

amount of medicine at a dose. The principle is the same but the dose is different. It requires as much skill for the osteopathic physician to prescribe and administer the proper treatment to a given case as it does for the doctor of medicine to prescribe the proper dose of medicine to a given case. The osteopathic treatment is adapted to the age, vigor and condition of the patient. None are too young, none are too old. Osteopathy is adapted to all periods from birth to old age. The infant and the infirm must be handled with extreme care and gentleness, the more robust with equal skill, but more vigorously, if indicated. Patients are never too weak or too sick to be treated by osteopathy. As a rule in acute diseases the treatments are given much more frequently than in chronic troubles.

Osteopathy treats acute diseases more successfully than does any other method of treatment. It does not seem necessary after such a statement to enumerate the separate diseases, for the assertion includes all diseases that are amenable to any treatment. Yet osteopathy has never made claim to being a cure-all. It has its acknowledged limitations and does not claim to accomplish the impossible. It is content that, as a system of treatment, it has demonstrated an effectiveness far superior to any other method.

Thousands of families now call upon the

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osteopathic physician for the relief of all their ills and daily he is becoming more popular as a family physician.

Osteopathy—How It Differs from Other Manual Methods.

In the minds of some otherwise well-informed people, osteopathy is occasionally confused with massage, Swedish movements, physical culture, exercise, or even simple rubbing. The medical profession particularly appears confused as to what the practice of osteopathy is. They often labor under the delusion that massage and osteopathy are very similar, if not identical. This depreciating idea can issue only from an utter ignorance of the cardinal principles of osteopathy, or from a very superficial knowledge of massage.

These means of treatment just alluded to are each of value under contributing conditions, but between them and osteopathy there is little similarity either in principle or practice. Osteopathic physicians may make use of them as aids or adjuncts, as would also the medical practitioners; but these adjuncts bear no more distinctive or significant a relation to osteopathy than they do to the practice of medicine. It might as well be claimed that they constitute the practice of medicine, as to say that they are the same as osteopathy. It can not be too strongly asserted or im-

pressed that osteopathy is a complete SYSTEM or science of treatment, while these other manual methods are merely small parts of a system, mere adjuncts or supplements.

Massage in some form has been practiced by all ancient peoples; it had reached an advanced stage of perfection as early as the days of Hippocrates. It consists of a series of routine rubbings, strokings, tappings, and kneadings, executed in a general and very indefinite manner. It is such work as is delegated to nurses and does not demand especial knowledge of the body or of diseases.

Swedish movements were introduced in 1814 and they consist of little more than systematized exercises. Physical culture was practiced by the ancient Greeks and is merely the application of certain exercises for physical development. Ordinary exercise, judiciously prescribed, is of great value, to be sure, under approximately normal conditions; but it would be verging on the criminal to recommend it to patients acutely ill of pneumonia or typhoid fever or meningitis. In the presence of these critical conditions, osteopathy is invaluable, indispensable.

The fundamental fact in the conception of osteopathy is ADJUSTMENT. Any method which does not embrace this principle is not osteopathy. Neither massage, nor Swedish movements, nor physical culture, nor simple

exercises, have even a remote suggestion toward correcting mal-adjustments of the body structure. This fact places them in an entirely different class from osteopathy.

To the end of properly adjusting the human machine when any of its parts are deranged and disease is present, the osteopathic physician must possess an intimate knowledge of its structure. An intimate knowledge of the skeleton—its every bone, its individual peculiarities, its relation to every other bone to which it is joined and to the body as a whole—a deep comprehension of the blood vessels—their devious course and their ultimate minute ramifications, and the parts or organs to which they are distributed; a mastery of the nerves—from their centers in the cord and brain to the most distant cell over whose function they preside; a wide understanding of all the organs of the body,—their location and structure, as well as the evidences of their normal activity or symptoms of their disturbance—these are the *sine qua non* of the equipment of the osteopath. No surgeon needs to know anatomy more thoroughly than does the osteopathic physician. His knowledge of anatomy is his chart and compass and his cures will register in proportion to his ability to recognize and correct deranged anatomical conditions. He must not only be able to perceive the location of the maladjustment, he must know how it is misplaced to be

able to interpret its effects, and to bring definite mechanical principles to bear in replacing it. Since every moveable joint in the body is liable to misplacement, it is obvious that there can be a great range of maladjustments, both as to their location and character. Consequently there can be no such thing as routine treatment. Each case must be diagnosed and treated according to the causative condition present, and peculiar mechanical principles of treatment will apply to that particular case alone. The manipulative skill required of the osteopathic physician must exceed that of the surgeon. Not only the large joints, but every joint in the body, no matter how deeply hidden beneath masses of muscles and tendons or how obscurely located, must be subject to the osteopath's deft hands. His sense of touch must be delicately educated so that no variation from the normal in position or consistency of tissues can escape his notice. He must possess the delicate touch of the blind, not that he may read raised print which to the ordinary touch is meaningless, but to the end that he may read, to the minutest deviation from the normal, the structures of the body.

No time limit can be set upon the length of an osteopathic treatment because in no two cases are the abnormalities the same. In one case the adjustment may be accomplished in a moment; in another case several minutes

of preliminary relaxing treatment may be required before adjustment can be made. It may be said, with reasonable modifications, that the less the time in which the adjustment can be made, the more skillful will be the treatment and the better the results. The advice of Dr. Still was to "find it, fix it and leave it alone"; this is the keynote of an osteopathic treatment.

There is no knowledge or skill of value possessed by any other school of healing that is not utilized by the doctor of osteopathy. The adjuncts or aids have their sphere of usefulness but they are not osteopathy nor are masseurs and other practitioners of manual methods osteopaths. A stone mason is a useful member of society, but he is not a sculptor; a house painter does a good service, but he is not a Raphael; the engine wiper who keeps the engine rubbed and polished is doing well, but he is not adjusting its deranged parts. So the practitioners of these adjunctive methods are each good in their sphere, but they no more approach osteopathy than does stonemasonry resemble sculpture, or house-painting, portraiture, or engine-wiping, engineering.

OSTEOPATHY IN DISEASES OF WOMEN.

It is unnecessary to discuss here the prevalence of those diseases peculiar to women. Whether it be due to some inherent weakness of their physical organization, the demands of modern society, unhygienic living, improper dress, or what not, the fact remains that women assuredly have more than their proportionate share of bodily ills to bear. From the time the girl lays aside the characteristics of the child, for thirty years or more, she is the prey not only to the ills common to the rest of humanity but also numerous other disorders peculiar to her sex.

Special instruments devised for the examination and treatment of diseases of women have been found in the ruins of ancient cities. Specialties were practiced by the physicians of ancient Egypt and it is altogether probable that the treatment of the diseases peculiar to women was one of the earliest of these specialties. Cleopatra is said to have written books on the subject.

So prevalent are these diseases today that their treatment comprises a large part of the physician's work. Every school of medicine recognizes their importance to the extent of

having special courses of instruction devoted to them. Their treatment is now one of the most profitable specialties. From the signal and pronounced failure of drugs, the treatment in medical hands has become almost entirely surgical; and surgery has become the most lucrative as well as the most abused field in medicine. Yet we have no complaint to make against legitimate surgery; there is nothing that can replace it, and its results when properly applied are marvelously beneficial. Still it is a patent fact that the medical world is today surgery mad.

There are few professors in the medical schools today teaching how operations may be avoided or prevented; but there is a host constantly employed devising new operations, each more daring than the last, and turning out scores of inexperienced operators. Each of these operators, to become expert, must have victims upon whom to operate. The surgical hue and cry is for brilliant and skillful operations, too often without sufficient consideration for the patient.

There are many private and public surgical hospitals to be maintained, and to this end numerous operations are necessary. From the inherent nature of the case, a surgeon, who at best is only human, easily and unconsciously becomes so biased as to perceive only the operative side of many cases. It is amazing for what trivial conditions the surgically-

minded doctor will advise operations,—operations serious in nature and operations that offer no positive assurance of relief or cure. There is a strong tendency to regard the removal of a diseased organ as not only the proper but the exclusive way to cure, even though the disease be but slight. The physician should realize that there are remedial agencies other than the knife, and should restrict mutilating and sacrificial operations to their legitimate field. Surgery should be the court of last resort except in those cases in which it is clearly and unmistakably demanded, for from the consequences of surgery there is no appeal.

Osteopathy possesses resources so powerful, so active, so reliable, that no woman should be subjected to the dangers and mutilation of an operation until its conservative powers have been intelligently tested. A course of osteopathic treatment does not present the spectacular effect nor the thrill of a serious and dangerous operation; it does not create the sympathy among one's friends, so desired by many, nor does it necessitate a long period of convalescence. It does, however, eliminate the danger, shorten the time of recovery, and is altogether less objectionable. From its results there is still an appeal to the knife, if necessary, but after the knife, if unsuccessful, there is no recourse. "Yet such is the haste in the performance of this

work, a work properly of last resort, that our hospitals particularly have become the sacrificial temples of this new faith. Here women by the score, without previous attempt at treatment, are persuaded to undergo operations dangerous to life and unwarranted by sound judgment. These operations are often followed by lifelong consequences to those who recover, consequences that are either carefully concealed or else carelessly withheld from their knowledge before consent is given." Too often promises of immediate cure are made, and after the operation the disappointed patient is informed that it requires at least a year to recover from the effects of even a successful operation.

Diseases of women respond to osteopathic treatment promptly. Operations are avoided in many cases in which surgery had been declared necessary. The fact is that many operations are unnecessary. While the osteopathic colleges teach surgery as a valuable means of treatment in some cases, yet they oppose the tendency to operate for trivial and unnecessary causes, and they teach how these diseases may be cured in many instances without operations. The osteopathic physician is qualified to decide when surgery is necessary and will advise it when it is best. Osteopathic treatment is safe, reliable and free from dangerous after-effects.

Osteopathy secures its results in these

cases as in others, by the adjustment of deranged structure, by the effect upon the pelvic organs resulting from the manipulation of their appropriate centers, and by enforcement of all natural laws regulating the needs of the body. Displaced organs are replaced, and their natural supports are so toned up as to retain the organs in place. Congestions and inflammations are reduced by re-establishing normal circulation. The symptom of pain is traced to its original cause and this osteopathy removes. Likewise, irregularities in the natural functions are corrected by finding and removing their causes.

That part of the spine below the shoulders, about the waist-line, including sacrum and innominate, is the portion in which derangements are especially liable to affect the feminine organs and functions. Here the growing girl, nearly always more or less of a "tom-boy," receives in active outdoor life and play many strains and misplacements. These are only of passing notice until she begins to bud into womanhood. It is at this period that these derangements begin to reflexly disturb the new functions of womanhood, functions that should be initiated as naturally as the bud develops into the rose, as painlessly as her figure develops into that of a woman, and as naively as her mind evolves its childish thoughts into mature considerations.

Any deviation from this harmonious program usually indicates some structural derangement along the nerve paths running from the governing centers of these organs; or displacement of organ from strain or fall; and it indicates further, that the corrective manipulation of the osteopathic physician, and not the knife of the surgeon is needed. The osteopathic physician can locate and remove these malpositions of the tissues, set free nature's forces, and thus relieve the pains, the irregularities, and the delays incident thereto.

Associated with and incident to motherhood is a host of irritating strains and wide room for resultant accidents. As a preparation for these events, nothing is equal to osteopathy; it keeps the circulation good, renders active all the functions of the organs, and maintains the general health intact. According to the related experiences of thousands of women who have been attended by osteopathic physicians during childbirth, it is an inestimable boon. It greatly lessens the pain, shortens the duration, and reduces the likelihood of accidents.

Results follow childbearing that may or may not have been avoidable. We refer to inflammations, displacements and irregularities, with all their attendant symptoms. For these the aid of the surgeon is usually invoked, though in many cases unnecessarily.

In most of these cases the application of osteopathic methods will in itself effect the cure. The same structural derangements that cause trouble for the near-grown girl are often the underlying cause for the disturbances occurring at childbirth. It may require the additional strain and cares of motherhood to bring out or cause to become operative the hidden weaknesses, resultants of spinal misplacements or strains received years before.

At the close of the childbearing period comes another period dreaded by some women; yet it is one that should come as naturally and as tranquilly as autumn follows summer. It is during this period that cancer is most frequent; when this disease occurs there is only one remedy,—the knife—which if used sufficiently early may save life. We acknowledge the limitation of osteopathy here, and the osteopathic physician in these cases will advise surgery. This period is often accompanied by many nervous disturbances and when these do occur they are enough to make the time one of dread and foreboding in any woman's life. Many women look upon these distressing conditions as natural, and bear them without complaint. This is an entirely wrong view, for discomforts at this time are unnatural and have a removable cause for their occurrence. When the organs involved have a perfect nerve and

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blood supply these changes will occur without arousing the reflex miseries so commonly seen. Here again in removing all impediments by adjusting the body structures, osteopathy records another victory over human infirmities.

THE PROPHYLACTIC VALUE OF OSTEOPATHY.

The greatest advances attained in medical science have occurred along the lines of the prevention of diseases. Improved hygienic and sanitary conditions, will in time, practically eradicate yellow fever and cholera from among civilized nations. Smallpox has ceased to be a scourge. Malaria is being rapidly stamped out; typhoid is by no means the menace it once was; there is a probability that tuberculosis will, at no distant time, be less a scourge than now. While these are achievements that can be recorded, it is at the same time true that some of the most virulent and incurable diseases are increasing.

In its endeavors toward the *prevention* of diseases the medical profession has in the main considered the welfare of the mass of society, and has neglected the immediate conditions affecting the prevention of disease in the individual. This assertion is not intended as a harsh criticism, but is merely stated for its value as a fact. Osteopathy, while it endorses and approves all that has been done for the mass of the people, at the same time meets the needs of the individual and makes a personal, an individual, application of the principles of prevention.

Municipalities, corporations, and individual enterprises employ inspectors of various kinds in their business affairs to prevent pecuniary or vital disasters. There are building inspectors, fire inspectors, boiler inspectors, and auditors; every line of efficient business employs experts to see that its affairs proceed to the end of efficiency and to the elimination of danger and disaster. This is wise; but such wisdom is merely a stepping-stone to the most important and commanding of all economic wisdom,—we refer to the inspection of the human machine, to the end that all its parts may occupy their proper positions, and that all its functions may be properly performed, and that the most priceless of all possessions, health, may be conserved. Many of the weaknesses, the disease tendencies, and the small beginnings of disease could be located in this way, removed in their incipiency, and grave troubles be prevented.

A thorough examination by a competent osteopathic physician, the body inspector, would discover the weak spots, the places of least resistance; and their correction and restoration could be speedily accomplished. This would be individual and personal application of the principles of disease-prevention indeed, and it would afford the truest health insurance. Osteopathic physicians are daily treating patients for the results of strains or

injuries acquired in former years. These strains or injuries have in the intervening time caused diseases, often with permanent tissue changes and incurable after-effects, which might easily have been prevented had the injury been properly cared for immediately after its production. For example, a person with a lesion reflexly affecting the kidneys, could have it removed and, as a resultant, escape Bright's disease; or the removal of lesion affecting the vaso-motor centers would prevent that modern bete noir, high blood pressure; or the correction of a lesion affecting the stomach and bowels, would forestall disease from these vital organs. Such examinations would not only lead to the relief of existing troubles but would remove a great part of the liability to others, would increase bodily and mental efficiency, make life a joy, add years to one's life, and life to one's years.

It is a philosophic truism that, "coming events cast their shadows before." These shadows are often the minute tissue derangements that are to be located only by the skilled fingers of the osteopathic physician, and interpreted only by his reasoned logic that, "mechanical derangements in the body machine are pregnant causes of diseases." A body machine with all its parts in perfect position, like an inanimate machine, is in a condition to withstand the enormous amount

of wear and tear incident to its daily duties. Derange one part, ever so little, and you have started a destructive tendency, that if uncorrected, may lead to wreckage and the scrap-heap. If the presence of the derangement be appreciated, and if it be removed before the damage is too great, the human machine, with its wonderful recuperative powers may resume its original state of perfection, and the wreck and the junk-pile will be escaped. Often the hustling business man gives down suddenly and unexpectedly. On examination it is found that there have been in operation for years causes, minute beginning of disease that have so reduced his resistance and vitality that he gave way under some slight strain, through which he should have passed unharmed. These slight and insidious causes acting for a long time have broken the man's health, as the single straw is said to have broken the camel's back.

In infectious diseases there must be a primary cause antedating the germ invasion. Something must have reduced the vitality and resistance of the affected tissues before the ever-present germs could have become active. The uniformity with which the osteopathic physicians find similar spinal derangements in the majority of cases of typhoid, pneumonia, tuberculosis, appendicitis, and other diseases, leads to the inevitable conclusion that such spinal derangements, by decreasing

vitality and thus allowing germ invasion, are in themselves the primary causes of these diseases. Had these spinal conditions been recognized and corrected, the liability to such diseases would have been correspondingly reduced. The osteopathic profession does not claim that disordered spinal conditions are the *sole and only* agencies lowering vitality and permitting germ infection; but they do claim that in a host of cases a disordered spine is the primary agency to this result.

As public hygiene and sanitation have done much for the masses in preventing diseases, so personal hygiene by removing obstacles to the free flow of the vital fluids and forces, can do much toward preventing diseases in the individual. Many people now go to the dentist periodically as a means of oral prophylaxis. This should be done in order to preserve the teeth, and through them the general health. Yet the possibilities of harm from this source are insignificant as compared to the possibilities of harm arising from disturbed and neglected mechanical conditions in the human body-machine. When this claim is properly appreciated, the osteopath will be visited periodically, so that the machine may be kept in order, that one's faculties and activities *may be preserved* alert. Then pain and sickness will be reduced to a minimum, and the declining years will be years of ease of body and peace of mind.

OSTEOPATHIC EDUCATION.

The new treatment, osteopathy, finally became so popular that Dr. Still, its originator, was unable to care for all the patients who came to him, and he required assistants. Naturally he first taught to his sons the principles he had discovered and developed. The demand for practitioners continued to increase; others wished to learn the new philosophy of healing, and the organization of a school was forced upon Dr. Still. The services of the late Dr. William Smith were secured to teach anatomy and physiology, while Dr. Still surrendered sufficient time from his busy practice to teach the principles by which he had become the master of diseases.

The first class of about twenty students began in November, 1892. This class was graduated the following year. The course of instruction was crude and incomplete, compared with that now required, but from that first attempt has evolved a course of instruction that is second to none in thoroughness and admirable in its comprehensiveness. The first school of osteopathy was chartered in May, 1892. It was housed in an insignificant frame building of one story, only fourteen by twenty-eight feet in dimensions.

Our Colleges are now creditable institutions. Most of them have come to own their own magnificent buildings, and all equipped with the most up-to-date facilities for teaching the science of bodily structure and function, and the diseases to which this body is subject. These schools have the most modern laboratory equipment in all their departments, chemical, bacteriological, microscopical, physiological, and pathological.

We compare the osteopathic with the medical educational standards, not because of invidiousness, but merely because the medical standards are well enough known to render comparison significant.

The time spent in acquiring a medical education is usually four terms of seven months each. The osteopathic course requires, as a minimum, four years of eight months each, and some of the schools give an even more extended course.

The American Medical Association requires a minimum of four thousand hours work in the four terms. The American Osteopathic Association requires a minimum of four thousand, three hundred and twenty hours of work in the same number of terms, arranged as follows:

Curriculum Required by the American Osteopathic Association.

<i>Subject</i>	<i>Hours</i>
Anatomy.....	600
Physiology.....	300
Biology.....	64
Pathology.....	250
Embryology.....	60
Histology.....	160
Chemistry.....	320
Bacteriology.....	160
Hygiene.....	45
Dietetics.....	32
Principles of osteopathy.....	80
Osteopathic technic.....	160
Hydrotherapy.....	16
X-Ray.....	32
Osteopathy, general diagnosis and treatment.....	1200
Ear, nose, throat.....	60
Eye.....	60
Surgery.....	320
Gynecology.....	145
Obstetrics.....	150
Jurisprudence.....	16
	<hr/>
	4,320

From this curriculum, adopted by the Associated Colleges of Osteopathy and approved by the American Osteopathic

Association at its annual meeting of 1916, it will be seen that the Colleges of Osteopathy are well up to the Medical Colleges in the amount and character of work they give their students. A capable man or woman who receives this course of instruction, having first had at least a High School education or its equivalent, as is now the requirement for entrance upon the study of osteopathy, is fairly prepared to begin the struggle to prevent sickness and restore sick people to health. But less preparation than this is hardly sufficient.

This seems to be the joint conclusion of the Educational Department of most States and of the osteopathic profession. Medical education is a means to an end—competency and safety for the public. Should not this fact make people careful in employing strange and unlicensed healers?

The impression that the doctor of medicine is better educated to care for the sick or to give advice in matters of illness than the doctor of osteopathy is erroneous. The subjects taught in the two schools are practically the same except that the osteopathic physician, disbelieving the curative power of drugs, devotes little study either to *materia medica* or to pharmacology. He substitutes for these the principles and practice of osteopathy. It does not follow, however, that the

same subjects are studied in the respective schools from the same view-point, or that their relative importance or application is the same, for it is not. There are at least three points of radical departure from the drug system to be noted in the osteopathic system of healing: first, in the theory of the cause of diseases; second, in their diagnosis, and third, in the manner of their treatment. For this reason subjects that may be common to the two schools by no means receive the same method of consideration.

The subject of anatomy is fundamental to both schools, and yet it is viewed quite differently. To the doctor of medicine it is of general interest and of more especial importance because of its bearing upon surgery. The general practitioner of medicine can administer his drugs quite successfully with but a poor knowledge of anatomy. But not so the osteopath. To him anatomy is of vital importance because the slightest deviation in anatomical structure is considered by him as a possible cause of disease. He must become thoroughly familiar, not only with the cadaver, but with the living body, so that variations in its structure may be recognized. His ability to recognize and correct these anatomical derangements is the measure of the success of his treatment.

The doctor of medicine considers germs as the active cause of diseases; therefore bacter-

iology becomes to him of prime importance. The doctor of osteopathy gives bacteriology due consideration, but to him it is of less importance because he believes that germs are secondary causes in most diseases, the primary cause being the condition which lessens tissue resistance and allows germ infection.

In close relation to the subject of anatomy comes the consideration of osteopathic technic and tactile training. Tactile training really comes first in order. It has no place in the medical course, but in the osteopathic curriculum it is indispensable. By this training the sense of touch is so educated that the slightest irregularity in structure or position of the tissues is recognized and interpreted, as are the raised letters distinguished and read by the educated fingers of the blind. The medical doctor denies the existence of these minor derangements because his touch is not trained to appreciate them. It is just as logical for the man with sight to deny that the raised letters or the braille point of the blind have existence. To the osteopathic physician many conditions, meaningless to untrained fingers, stand out as signboards of disease and are of the utmost importance in his diagnosis and treatment.

Osteopathic technic teaches a skillful execution of the corrective manipulations which are themselves the distinctive feature of osteopathic treatment. It considers the

application of the proper mechanical laws by which the malpositions can best be adjusted. It calls for the most intimate knowledge of the joint structures, not only that their derangements may be recognized, but that the mechanics of their normal action and the mechanical principles involved in readjusting them may be observed.

Pathology in the osteopathic schools embraces all that is taught as pathology in the medical schools. It has in addition a more extended application and meaning than has ever been taught or appreciated by the medical schools. This broader phase of pathology shows the effects of maladjustments upon near and remote tissues, how and to what degree they interfere with the activities of the organs with which they are directly or reflexly connected. These effects have been demonstrated by experiments and actual clinical results.

A course on the principles of osteopathy occupies the place given to *materia medica* and *pharmacology* in the medical schools. This is perhaps the most distinctive feature of the osteopathic training. In this department the underlying principles of the science are unfolded and elucidated, and their application to the cure of diseases demonstrated.

Diagnosis includes all the latest medical methods and adds to them the methods that are peculiarly osteopathic. These are espec-

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ially dependent upon tactile training, a feature that is neglected in the medical course.

It is not to be inferred that because the osteopathic physician does not administer drugs that he is unacquainted with their action. This is taught under the subject of toxicology. It is taught in order that the osteopath may be able to recognize the harmful and poisonous effects of drugs, and that he may institute proper treatment for them.

The medical physician relies upon drugs to effect cure, and gives the scant attention to other curative methods. The osteopathic physician thoroughly investigates the adjunctive natural methods for treating diseases and makes use of all those that are efficacious and harmless. Since the call for osteopaths as family physicians is daily growing, a course is given in emergency treatment so that no condition may arise which the osteopathic physician is not as well qualified to handle as any other practitioner.

The urgent and universal demand upon all physicians of the day is the demand for practical experience. This a few of the medical physicians can get by hospital appointments. This need is supplied to the osteopathic student, before he graduates, by extensive clinical practice. Under the supervision of trained clinicians he is supplied not only with the theory but with the practical bedside experience, for here he meets and handles

those cases and emergencies that arise in every day experience. He leaves college thoroughly prepared to do the best thing possible under all conditions of human suffering.

It is obvious that throughout the entire course in the two schools, the medical and the osteopathic, the view-point and application differ on almost every subject. To the medical doctor the body is a living laboratory in which his remedies effect chemical changes. To the doctor of osteopathy the body is no less a living laboratory, but it is primarily a vital mechanism, upon the structural integrity of which all vital activities are dependent. The one gives drugs (usually poisons) to normalize (?) vital activities; the other corrects structure.

It must now be clear to the unprejudiced mind that the osteopathic physician is the peer of any. He makes his own diagnosis after an examination that is unique in its thoroughness. His knowledge of the body and of diseases is thorough and complete; his manipulative skill is equal to that of the most dexterous surgeon. His education is thorough, comprehensive and practical. In addition to the latest medical ideas and theories regarding the causes, diagnosis and treatment of diseases he has his own distinctive and peculiar methods. He rejects only that part of medical teaching that has failed in results and applies instead of these unreliable meth-

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ods others that are trustworthy, harmless, scientific and demonstrable. Osteopathy is not something less, but something more than medicine.

There is no individual talent or accomplishment that can not find full expression in the study of osteopathy, and to men and women of proper preliminary education it offers one of the most inviting fields of worthy endeavor.

OSTEOPATHIC ORGANIZATIONS AND PUBLICATIONS

The first osteopathic organizations originated from the necessity of self protection and the need of mutual helpfulness.

The progress of osteopathy from its beginning was opposed by organized "medicine" in the form of State Boards of Health, County, State and National Medical societies. The individual osteopathic physician was almost helpless against these powerful and influential organizations, and when assailed in the courts would easily have been eliminated from the field of practice if his colleagues had not rallied to his assistance. In this way the first organizations were formed. From these local organizations, many of the State societies grew.

A preliminary meeting looking to the establishment of a National Osteopathic Association was held at Kirksville, Mo., on February 6, 1897. The need of self protection was still present, but the dominant sentiment of this meeting was for the advancement of osteopathy and the establishment of its principles as the true system of healing. On April 19, 1897, a permanent organization known as the American Association for the

Osteopathy, the Science

Advancement of Osteopathy was effected at Kirksville, Mo. Annual meetings have been held since this time. At the second meeting, June 29-30, 1898, there was an attendance of almost 200.

In 1901 the name of this organization was changed to the American Osteopathic Association which name it still bears. The Association now has a membership of nearly 4,000, representing the most progressive men and women of the profession. The attendance at the annual meetings has steadily increased until it now averages between 1,500 and 2,000.

The qualifications for membership in the American Osteopathic Association are graduation from a recognized osteopathic college, good professional and moral character, compliance with the laws and ethics of the association and of the State medical practice Acts, and the payment of the annual dues.

The American Osteopathic Association has the usual officers of organized bodies—a president, two vice-presidents, a secretary and a treasurer. These are elected annually by the members of the association.

The business body of the association is a board of trustees, eighteen in number, one-third of whom are elected annually. They meet annually before and during the regular meetings of the association. In the interim between the meetings of the board of trus-

tees, the business of the association is conducted by its Executive Committee of seven chosen from the board of trustees.

The association has the following standing committees or departments: Education, Publication, Finance and Development, and Public Affairs.

The last named department has the following bureaus under its direction: Public Health, Clinics, Public Education, Legislation, State and National, Statistics, and Publicity. Special committees are appointed as circumstances may require.

Every State now has a splendid organization of the profession dedicated to the work of raising the standing and usefulness of the practitioners of osteopathy and to the protection of the public from those not qualified to practice. In addition to this in every large city and many district organizations in the populous States there are such organizations holding frequent program meetings. More recently there have been organized clinics for the care of those who cannot pay for treatment. In some of the cities the profession, in addition to giving its services to this work, have contributed thousands of dollars to establish and maintain these clinics.

There are several private sanitariums conducted by osteopathic physicians, for it has been noted that sometimes cases which make poor progress while subject to the worries of

business or household cares make splendid recoveries under proper osteopathic care, where diet and habits can be regulated. One such institution for the exclusive care of mental and nervous cases has been established within the year and has already shown most remarkable results in supposedly hopeless conditions.

The Associated Colleges of Osteopathy was organized in 1898. The object of this organization was to regulate, unify and combine the reputable colleges of osteopathy in order to elevate the standards of osteopathic education. Attracted by the success of the graduates of the legitimate colleges of osteopathy, many correspondence schools, diploma mills, and other specimens and pseudo schools were organized. In order to protect themselves and the public, the schools that were consistently and conscientiously endeavoring to teach thoroughly the true principles of osteopathy, originated this organization. It meets annually or oftener, and has been a powerful agency in developing the present high standard of osteopathic education.

At the annual meeting of the National Association July 2-4, 1901, the necessity for an official organ was recognized. This need was met by authorizing the publication of the Journal of the American Osteopathic Association. This journal was to be chiefly scientific in character. It was to contain the pa-

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pers read before the association and the discussions arising from them; official communications, contributed articles, items of general news interest to the profession, reports of legislative activities, reports of State associations, judicial matters, etc.

The journal was originally a 48 page monthly publication. It has steadily grown until it now contains twice as many pages and takes front rank among the best scientific and professional journals of any school of practice.

The desirability of some medium to present all phases of osteopathic interest and activities to the laity was recognized at the meeting of the National Association in 1913, and the publication of the Osteopathic Magazine was authorized. It is the official organ of the osteopathic profession to the laity. Its mission is to deepen and broaden the common conception of osteopathy and its activities. It primarily presents the claims of osteopathy as a therapeutic agent, but in addition to this presents it in its relation to other therapeutic measures as well as to every movement or agency that tends to the betterment of the human race.

It discusses from the osteopathic viewpoint the questions of hygiene and sanitation as related to public health. It aims to aid in all reforms that contribute to the health and happiness of the people, and to oppose all

unjust and arbitrary exercise of authority in matter of health regulation, that violate individual rights. It gives practical and useful advice in matters of diet as well as in personal hygiene and sanitation. It presents the distinctive contributions of osteopathy to the science, not only of curing but of preventing disease. It serves the purpose of a useful and practical health magazine. It is published from the general offices of the association at Orange, N. J. The subscription price is \$1.00 per year. The Association also publishes several high class health brochures, viz: "Why I go to the Osteopath," "That Machine You Call Your Body," "Childhood, the Period of Preparation," etc., copy of any one of which may be had by sending five cents for postage to the above address.

Besides these magazines there are several others, privately owned, with circulation running to many thousand copies monthly.

Some score or more of osteopathic textbooks have been written and published by members of the profession both for use of the student in college as well as for the physician in the field. These cover the subjects of Anatomy, Physiology and Surgery from the osteopathic viewpoint, as well as many works based on practical experience as in the treatment of certain diseases, as diseases of children, the peculiar diseases of women, as well as the field of general practice.

THE PRESENT LEGAL STATUS OF OSTEOPATHY

The laws regulating the practice of the Healing Art, prior to the discovery of osteopathy, had been framed either directly by the doctors of medicine or through their influence. These laws gave to organized medicine autocratic powers. Osteopathy originating as it did after the passage of these laws had no legal status. As soon as it began to be generally practiced, the medical profession invoked the aid of the existing laws, those of its own making, to suppress it. The public had no where appeared against it, but always in its favor. The conception of the cause of disease and the form of treatment were so radically different that there could be no confusion of the two systems by the public, so that the opposition by the medical organizations took on a not disinterested aspect. So different is the system, and so biased the medical profession, that after more than twenty years of successful osteopathic practice most medical men ridicule the idea of minute vertebral derangements and their operation as a cause of disease and of their correction as the logical cure of disease.

Many osteopathic physicians were arrested for practicing "Medicine" without a license and were haled before prejudiced medical boards for trial. These boards at once assumed all of the powers of the judiciary and became prosecutors, witnesses, jury and judges. The rank injustice of such arrests, their obvious animus and the farcical nature of such trials were apparent to all thinking people.

Unable to secure a fair hearing of their cause before the medical autocracy, the osteopaths appealed to the public sense of justice. They asked the aid of the people in securing the passage of just and equable laws that would guarantee them the pursuit of their practice without molestation.

Against the attempt to pass such laws, organized medicine presented the most determined opposition, so that in several States the passage of such laws as would free the osteopaths from the domination of medical influence was prevented for years.

Many people of national prominence volunteered to testify to the merits of osteopathy and to plead its cause. The osteopathic physicians have never asked for special privileges, but have merely desired to develop and grow unhampered by the interference of an antagonistic school of practice. They have made more rapid progress in scientific and educational development than any other sys-

tem of treatment, and claim as their right the opportunity to continue such advancement to meet their own needs.

Osteopathic legislation has made great progress, yet it is not all that we desire. Our ideal is for each State and country to have an independent board of examination and registration for osteopathic physicians, and for osteopathy to have equal legal recognition with other systems of practice.

In the following twenty-one States this ideal has been attained: Arkansas, Connecticut, Florida, Georgia, Idaho, Kansas, Louisiana, Maryland, Michigan, Minnesota, Missouri, Montana, Nebraska, New Mexico, North Dakota, North Carolina, Pennsylvania, South Dakota, Tennessee, Vermont, Saskatchewan.

The following States have osteopathic members on the regular medical boards of examiners: California, Colorado, Arizona, Indiana, Kentucky, Massachusetts, Oklahoma, Oregon, Texas, Utah, Virginia, New York, New Jersey, Washington, Wisconsin, Wyoming.

Four States have osteopathic committees or especially appointed representatives acting with the medical boards of examiners: Ohio, Delaware, Rhode Island, West Virginia.

In four States, osteopaths are examined and licensed by the regular medical boards:

Alabama, Illinois, Iowa, South Carolina.

Osteopathy is exempted from the medical act in Maine and New Hampshire.

Three States permit osteopathy but do not authorize nor prohibit its practice: Mississippi, Nevada, District of Columbia.

Osteopathic physicians have secured favorable laws in several of the provinces of Canada and are practicing without molestation in England, Ireland, Scotland, Wales, Sweden, France, Germany, Mexico, Italy, South America, Japan, India, Africa, and the Hawaiian and many other islands.

Osteopathy has not only proven its worth, but its superiority as a system of treatment; it has demonstrated its ability to more successfully cope with the needs of the sick than any other practice; it has shown that it possesses all that is of proven value in other methods together with its own distinctive merits, and we entreat of all lovers of fairness and justice to aid us in securing such legislation as will free us from the interference of prejudiced influence.

It is just as detrimental to progress and freedom in the healing art for one school of practice to have supreme power as it would be in the religious world for one sect to be dominant.

IMITATIONS OF OSTEOPATHY

The fundamental principles of osteopathy are, and have always been, THE ADJUSTMENT of the structures of the human body, more particularly those of the spine because the spine offers more opportunities for mal-adjustment than any other part of the body.

The application of these principles has been remarkably successful in the treatment of diseases, in many instances marvelous and spectacular results have been secured. Because of this a number of imitations and counterfeits of osteopathy have arisen.

The pioneers in the development of osteopathy had two courses open to them. One to develop osteopathy into a scientific and thoroughly dependable school of practice with the highest standards for its physicians; the other to heed the voice of commercialism, expedience and greed and allow it to degenerate into a low class money making scheme and to send out as many ill-trained and inefficient practitioners as they could in the least possible time to prey upon an unsuspecting public.

In the beginning a spirit of avarice and cupidity did possess a few and manifested itself by the organization of a few short course colleges and correspondence schools. This spirit was not allowed to hamper the

profession nor to prevent its development along the highest scientific and educational lines. The profession soon purged itself of these renegades by declaring a relentless war upon such institutions. The sole purpose of these institutions was to make money out of gullible students who were made to believe that the mere knowledge of a few movements makes one an osteopathic physician or at least something just as good. Disowned by the osteopathic profession whose basic principles they had purloined, but whose name they were not allowed to use because of the high standards established by it, some of these coined new names for the principles of osteopathy and under these the fakirs and charlatans have multiplied and the spirit of greed and commercialism has had full rein. They have succeeded in many instances in deluding some well intentioned individuals into the belief that they could acquire the requisite knowledge to treat and care for diseases of the human body by a course in correspondence or by a resident course of a few weeks or at most a few months; a fraction of the time, in fact, that is necessary to qualify in plumbing, brick-laying, carpentering, or any similar trade.

The osteopathic profession has consistently demanded and maintained high educational qualifications for all who would

enter it. It demands of its practitioners an exhaustive and complete knowledge of the structures of the human body as a prerequisite to its adjustment and a similarly thorough knowledge of diseases, their manifestations and the changes they produce in the tissues, as a preliminary to their care. Besides this, manipulative skill is necessary and this is impossible without a knowledge of the anatomy of the part to be manipulated. Adjustment may be secured in two ways, by skillful painstaking and by brute force. A shoulder or a hip may be displaced or out of adjustment and may be set or adjusted skillfully and without damage or it may be forced in place by brute force, regardless of the accompanying damage. In the more delicate parts, as the spinal joints, attempted adjustment without adequate knowledge of the structure may cause severe and irreparable injury.

It is readily seen that the acquisition of the necessary knowledge to be an osteopathic physician is no "correspondence school" matter but is a serious task of four years and an amount of work that exceeds that of many of the class "A" medical schools. Less than this is inadequate to prepare one to care for human ailments, and less than this cannot guarantee the protection to the public against inefficient and dangerous practitioners. These are the

requirements of the American Osteopathic Association and membership in this body is an endorsement that the holder thereof is the peer of any physician of any school of practice.

Of these so-called schools who seek to profit by the reputation that osteopathy has earned may be mentioned "spinology," "endopathy," "naprapathy," "menchanotherapy," "neuropathy," "spondylotherapy," "chiropractic" and perhaps others as new ones seem to be born daily.

"Spondylotherapy" is merely a tail to the medical kite and is practiced for the most part by medical doctors. "Chiropractic" is of all these counterfeits the most arrant. The chief requirement it makes of its graduates is the price of a diploma which may run from a few dollars to a few hundred. Requirements of preliminary education, if discussed, are merely the ability to read and write and the correspondence courses are recommended.*

These imitators shrewdly though fraudulently claim that their methods are fundamentally different from osteopathy and improvements upon it. This claim is absurd. The mere change in the design of a table for treating a patient or a particular movement in adjusting an abnormality can not change a principle. One might as well

**Harper's Weekly*, April 3, 1915.

argue that a change in the design of a chair or a different movement in pulling a tooth changed the principles of dentistry. The chief reason for such a claim is that they do not wish to brand themselves as counterfeits. Again in nearly all of the States there are laws maintaining high standards for osteopathy. To the lowest of these standards this class can not reach, therefore, they claim to be different so as to escape the operation of just laws for the protection of the public against ignorant pretenders, who if they do not actually injure the body, as has often been done, may prevent the patient from receiving skillful and efficient treatment.

The care of the sick is a responsibility that should not be lightly entered into and certainly not without due preparation.

One would scarcely trust the care of an automobile to a chauffeur whose training consisted of a few correspondence school lessons, yet there are some who have submitted their bodies to the ministrations of these self-styled "doctors" whose education and training is much less than that of the average mechanic. We would not deny that there may have been instances in which they have done good, for the principles of osteopathy, even though crudely and ignorantly applied, are potent for good. This fact by no means implies that they are safe

and reliable caretakers of the body in the crisis of disease.

The safety of the sick demands that those who profess to heal should not only know what to do but what not to do. Greater danger often arises from doing the wrong thing than from ignorance of the right thing to be done. The human body is too delicate, complicated and important a mechanism to be tampered with by any class of uneducated impostors.

These facts are given that the reader may be able to discriminate between the true and the false, the genuine and the imitation. The suggestion is made that before submitting to the treatment of any doctor, real or so-called, that his credentials be investigated and his record inquired into. This is merely the part of wisdom and safety.



